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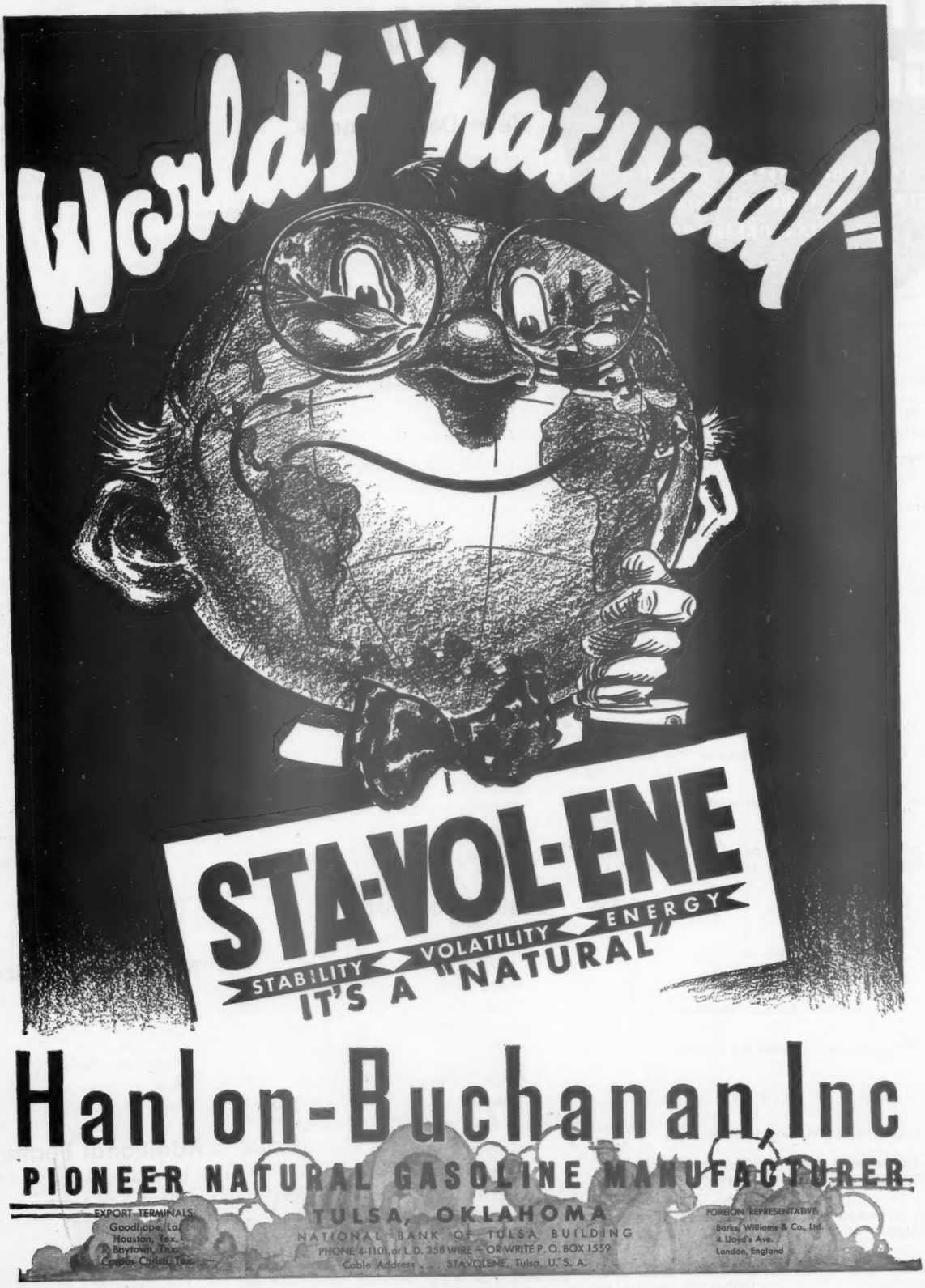
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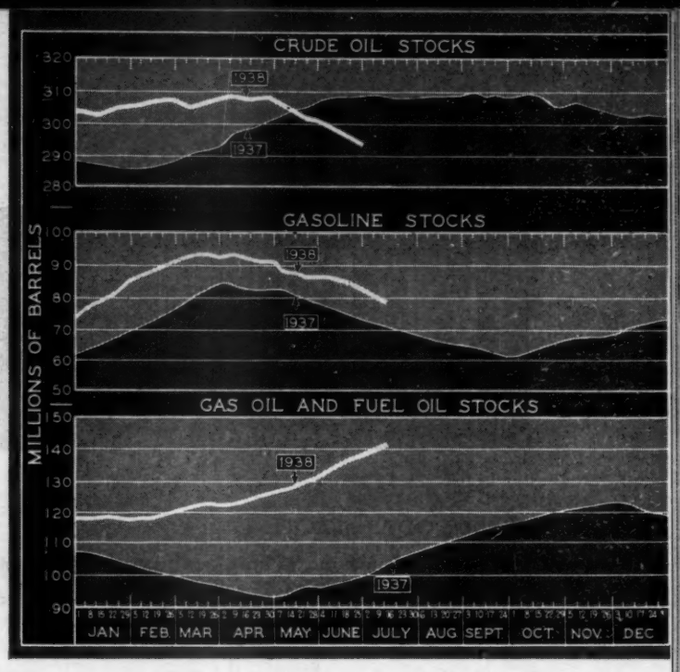
Trends

Output Must Be Low Enough To Continue Crude Withdrawals



A GAIN of more than 200,000 barrels daily in crude oil production last week has brought warnings regarding further increases this month. The increase resulted from a gain of 172,558 barrels in Texas, 66,700 barrels in Oklahoma, with smaller additions in New Mexico and Louisiana. The increases of the four states, totaling 259,106 barrels daily, were partly offset by a decline of 32,900 barrels in California.

CRUDE PRODUCTION *3,266,399 barrels daily average—up 219,916. One year ago 3,529,608 barrels.*

CRUDE STOCKS *293,463,000 barrels as of June 25—down 2,468,000. One year ago—308,709,000 barrels.*

GASOLINE STOCKS *79,893,000 barrels as of July 9—down 741,000. One year ago—73,976,000 barrels.*

GAS AND FUEL OIL STOCKS *140,587,000 barrels as of July 9—up 1,684,000. One year ago—103,537,000 barrels.*

REFINERY RUNS *3,095,000 barrels daily week ending July 9—unchanged. One year ago—3,325,000 barrels.*

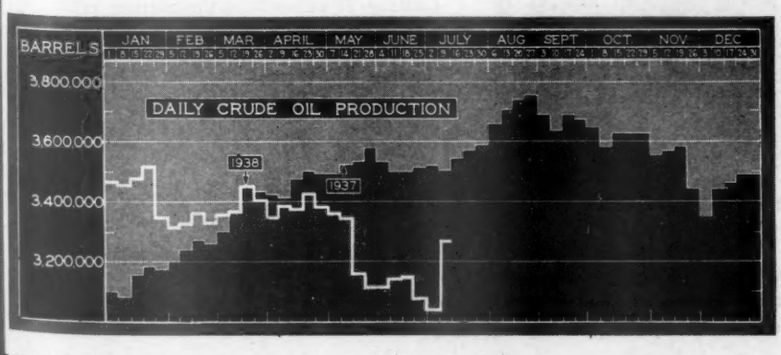
Texas production last week after lifting the Saturday shutdown was in line with the state allowable and Bureau of Mines recommendation for July. Oklahoma's output was in excess of what pipe lines have indicated they will be able to market during the month.

The recommendation that operators "make haste slowly" in increasing production from the low levels established last month comes from those familiar with crude marketing conditions. According to these observers national production should not be increased from last week's levels over the remainder of the month at least. They maintain there is still considerable crude oil in storage in the southwestern states which the owners are anxious to liquidate. This is indicated in the fact that these companies are offering spot crude despite the fact that they have been drawing on inventories for several weeks.

One observer estimates that the efforts to reduce these crude stocks will continue until an additional 40,000,000 barrels has been liquidated. Other estimates are much lower. The reductions since the first of May have totaled approximately 17,000,000 barrels.

The desire to reduce stocks is due to several reasons. In some instances companies need the money now tied up in these stocks to finance current operations. In other cases the pipe line systems are connected to new fields with large reserves and the stock requirements above ground of several companies are correspondingly less.

This situation is significant because it means that several buyers will not materially expand their current purchases of crude until such time as they have reduced their crude storage to minimum working requirements. The factors which enter into this situation can change quickly and it is for this reason that those in close touch with conditions are urging caution in expansion of operations.



DAILY AVERAGE PRODUCTION FOR WEEK

	July 9 1938	Bur. Mines July est.	July state allowable	July 2 1938
Oklahoma City	113,000			73,450
Fitts	38,700			39,175
Remainder of state	291,575			263,950
Total Oklahoma	443,275	518,400	428,000	376,575
East Texas	438,000			364,930
West Texas	214,496			181,119
North Central Texas	106,349			97,867
Texas Panhandle	60,798			65,216
East Central Texas	95,752			88,433
Gulf Coast Texas	340,698			303,739
Southwest Texas	108,447			90,678
Total Texas	1,364,540	1,360,300	1,359,192	1,191,982
North Louisiana	79,245			79,410
Gulf Coast Louisiana	189,350			179,867
Total Louisiana	268,595	260,600	249,745	259,277
California	630,250	642,300	615,000	663,150
Kansas	141,900	172,300	165,000	143,150
Arkansas	47,375	51,000		51,100
Eastern fields	142,000	149,700		140,750
Michigan	52,884	56,400		53,469
New Mexico	101,600	112,900	101,600	91,070
Rocky Mountain area	73,980	74,200		75,960
Total United States	3,266,399	3,398,100		3,046,483

Increase, 219,916 bbls. daily.

A similar condition prevails in gasoline. The recent decreases of approximately 1,500,000 barrels weekly in national gasoline stocks are in line with needs. If continued through the remainder of the summer they will place inventories where they should be at the start of the fall season and make possible the maintenance of a sound market position over remainder of the year.

In this connection attention is called to the fact that domestic gasoline shipments announced last week for May were less than in May, 1937. The same comparative situation was found in April. Continued heavy exports during these two months brought about an increase in total gasoline demand. Heavy foreign purchases largely account for the favorable comparisons shown in total demand this year and last year, summarized in the table appearing on page 28 of this issue.

SPARKS FROM THE NEWS

TENDERFOOT'S PLACE

Coastal Louisiana is no place for the tenderfoot. It costs more to get ready to drill most of the wells in that area than it does to drill them in many other sections.

NEW RECORDS

Gasoline consumption is establishing new records except for seven states, and they are running 95 per cent of peaks.

JUMP RIVER

The new Birk City pool in western Kentucky jumped across the Green River last week with a new well in Daviess County.

SCOTCH JOKE

There probably are the essentials of a Scotch joke in the fact that all Scotland is excited over a wildcat discovery good for 5 to 15 barrels daily.

SOUND OPERATION

Mid-Continent will refine 14,000 barrels more crude daily in July than in June, but 50,000 barrels less than a year ago.

THE REASON

The Oklahoma operator who was stricken with a chill Saturday while listening to a political speech in a 100-plus sun, suddenly realized what he would have to pay in additional taxes if the speaker's promises are realized.

BEAT THIS

Two contractors have drilled 100 wells totaling 71 miles in depth in the Wilmington, California, field without a dry hole, a serious fishing job, or delayed completion.

IMPROVEMENT

In February, one out of every four barrels of oil produced in California was going to storage. Now the operations are practically in balance.

GOVERNMENT SUPPORT

Government investigation supports contention that thousands of wells are producing far below costs.

TRANSPORTATION COSTS

The 50 per cent reduction in the operations of Wyoming's largest refinery is additional evidence of the increasing importance of transportation costs in refinery operations.

FAVORABLE JULY

Proration schedules for July practically assure a favorable supply demand situation over the next 30 days.

FOREIGN PURCHASES

Latest data show domestic demand for petroleum products running behind last year, with a 28 per cent gain in exports.

GOOD CUSTOMER

Normandie, the French Line flagship in service three years, has consumed 3,692,487 barrels of fuel oil in 100 round trips. This is equivalent to the gasoline needs of 82,000 cars.

HIGH OCTANE REQUISITE

One-hundred octane gasoline and lubricants capable of withstanding severe operating conditions were two reasons why Howard Hughes was able to go to Moscow via Paris in less than 25 hours flying time.

MICHIGAN DISCOVERY

A 500-barrel wildcat in Clare County, 25 miles from the nearest production, looks like a new field for eastern Michigan.

DECISION

Wichita Falls, Tex., may be the next oil center which will have to decide whether it wants town-lot drilling. A wildcat well has been completed near the city limits.

MANUAL OPERATION

Hand-operated core drill used by a geological party in northeast Borneo, N.E.I. Using 2-inch casing and 1-inch drill stem a depth of 750 feet or more may be reached

Wide Variations Shown in Cost of Oil Production

By G. R. HOPKINS[1] and K. L. STONE[2]

In this article two government investigators report their conclusions in regard to the cost of producing oil. The report covers representative areas in the United States with cost data for 1934 and 1937.

G. R. Hopkins is assistant chief economist of the Petroleum Economics Division of the U. S. Bureau of Mines, widely known in the oil industry as in charge of the monthly reports of the bureau on petroleum.

K. L. Stone is connected with the U. S. Tariff Commission which studies domestic production costs in connection with its continuous investigation of duties on imports. Mr. Stone headed the Petroleum Administrative Board's cost study during the NRA code.

Comment regarding the findings in this report is invited.

The average cost of producing crude oil in the United States in 1937 was about 85 cents per barrel; the average at the present time (June 1938) is probably a cent or two higher. These figures are of value when compared with the estimated average price of $1.20, but, like many averages of widely diversified results, they conceal much. One of the facts not revealed is that many wells were operated at a heavy loss in 1937. This was particularly true of the stripper wells in the eastern states, where crude-oil prices declined 25 per cent in the last four months of the year. Since the close of 1937 the eastern operators have suffered two additional cuts, so that now many of them are "losing" upwards of a dollar on every barrel produced.

How do the eastern operators keep going? Presumably by ignoring depletion, depreciation, and all other intangibles, and by cutting operating costs to the bone. For years these operators have enjoyed prices far above the average level, but certain developments in refinery technique presage a gradual diminution of that margin. If and when the sales price and the real out-of-pocket cost meet, the answer will be subsidy or wholesale abandonment of properties with consequent losses in reserves and employment.

Probably many stripper operators in the Mid-Continent are not getting rich, nevertheless, they have had no general price reductions since 1933.

As regards the producers in the Louisiana Gulf Coast and the operators of wells in central Kansas they may be surprised at the magnitude of their indicated profits in 1937, particularly at this time when many of them are operating under severe curtailment. However, considerable of their current pessimism is traceable to events of 1938 and to developments in other branches of the industry in which many of them are engaged.

The three districts selected for this cost analysis were Kansas, because it typifies the mixed stripper and prorated flush production of the Mid-Continent; the Louisiana Gulf, because it has by far the largest production per well per day of any district; and West Virginia, because its wells can all be classed as strippers. The data for 1934 in the charts (Figures 1, 2, and 3) were taken from the cost report of the Petroleum Administrative Board, the estimates for 1937 are based essentially on 1936 figures of the Bureau of Mines.

As is quite well known, company costs vary widely depending on the nature of the business and the accounting methods used. Although most of the variations are wiped out by averaging, no two cost analyses would be exactly alike. The estimates for 1937 given herewith should be essentially correct as they are supported by official compilations of prior years. Nevertheless, the authors, knowing some of the pitfalls inherent in this type of study, are disposed to be lenient toward any other set of

[1]Bureau of Mines, U. S. Department of the Interior.
[2]U. S. Tariff Commission.

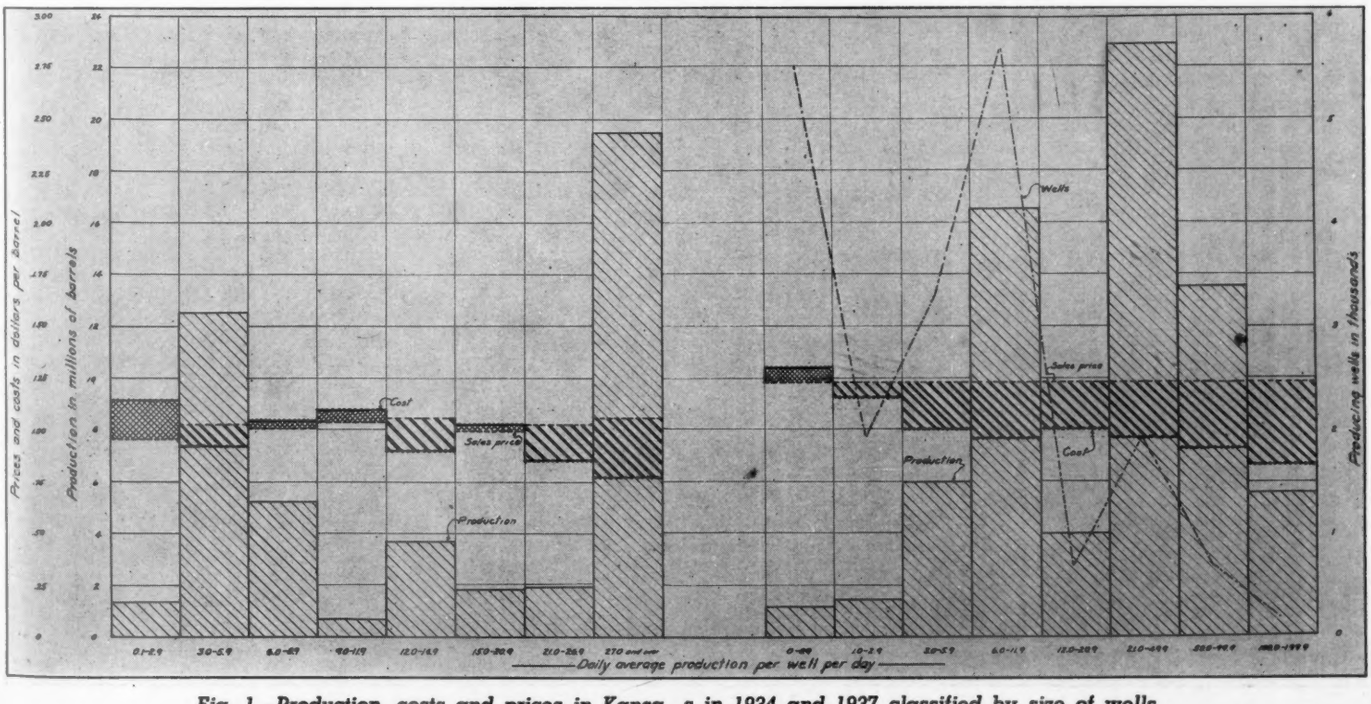


Fig. 1—Production, costs and prices in Kansa s in 1934 and 1937 classified by size of wells

TABLE 1—COST PER BARREL OF PRODUCTION AND SALES VALUE IN KANSAS, 1931-34*, AND 1937†

Period—	Expenses: Depletion	Depreciation	Development‡	Operating	Overhead§	Total	Miscellaneous revenue	Interest	Net cost	Average selling price
1927-1930¶	.100	.250	.230	.320	.410	1.310	.030	.110	1.390	1.390
1931	.086	.232	.052	.246	.459	1.075	.019	.102	1.158	.668
1932	.086	.228	.060	.251	.305	.930	.019	.104	1.015	.914
First nine months of 1933	.083	.206	.079	.211	.233	.812	.017	.084	.879	.545
Last three months of 1933	.074	.209	.070	.283	.252	.888	.023	.085	.950	1.029
1933	.081	.206	.077	.229	.236	.829	.019	.084	.894	.665
1934	.064	.159	.076	.259	.264	.822	.016	.076	.882	1.031
1937	.060	.130	.150	.260	.290	.890	.020	.100	.970	1.230

*Petroleum Administrative Board. †Estimates by the authors. ‡Amortization of intangible development cost. §General overhead and administrative. ¶U. S. Tariff Commission.

figures, particularly those on amortization involving estimates of reserves.

Kansas

The average production per well per day in Kansas in 1934 and 1937 was 6.9 and 9.5 bbls., respectively. However, the value of such averages for Kansas is limited due to the wide variation in size of wells, hence resort was made to the frequency distribution shown in Figure 1. In Figure 1 total production for 1934 is broken down into eight of the 10-size groups set forth by the Petroleum Administrative Board. For 1937 it was thought desirable to enlarge the groups on both ends so as to bring out the comparative importance of the smallest and the largest wells.

According to Figure 1, about 19,500,000 bbls. (42 per cent) of the total production in 1934 came from wells producing 27.0 bbls. and over per day. The only other important group comprised wells producing from 3.0 to 5.9 bbls. per day. This segregation of most of the production into two widely separated groups probably reflects the existence of two major types of production in Kansas, the stripper production of the eastern part of the state and the "flush" production from the younger fields in "west" Kansas. In 1937 production from wells producing 21.0-49.9 bbls. per day was of primary importance, although it is indicated that almost as much came from wells of even larger average production.

There were 19,800 producing oil wells in Kansas at the beginning of 1937, the distribution of which is shown by the dot-dash line in the right half of Figure 1. The largest group of wells (about 5,600) produced from 6.0-11.9 bbls. per day. The next largest group (about 5,500) produced from 0 to 0.9 bbl. per day. These were stripper wells in all senses of the word, their average output in 1937 being only about 0.6 bbl. per day.

Superimposed on the left half of Figure 1 are cost and price data of the Petroleum Administrative Board for the eight groups of wells. The intervals between the cost and price lines have been cross-hatched to show indicated profits and losses in production. In general, the lower-yield wells were operated at a loss in Kansas in 1934, profits not appearing until the production passed 20 bbls. per day.

On the right half of Figure 1 are plotted the estimated cost data for 1937, together with an estimated average sales price for the state. No attempt was made to estimate sales realizations for the eight groups as the left half of Figure 1 shows that sales prices are virtually uniform regardless of the size of the wells. On the other hand, costs vary materially between the groups, hence considerable time was devoted to estimating the costs for each group. The principal basis of these estimates was the net cost items for 1934 ($.882) and 1937 ($.97) shown in Table 1. A brief resume of the method used in computing 1937 costs will now be given.

The same standard cost items used in the cost studies of the Tariff Commission and the Petroleum Administrative Board were employed, these being (1) *depletion*, (2) *depreciation*, (3) *development costs*, (4) *operating expense*, (5) *overhead*, (6) *miscellaneous revenue*, and (7) *interest*.

Depletion: Depletion represents the write-off of initial lease costs in the ratio of production to reserves. Depletion *per barrel* varies with lease investment and reserves but is independent of production. According to The Oil and Gas Journal, reserves in Kansas are reported to have increased from about 600,000,000 bbls. on January 1, 1937, to about 650,000,000 bbls. on January 1, 1938. (The books of the Kansas producers would probably show more conservative totals, but that fact is relatively unimportant.) However, this gain in reserves in 1937 was probably offset by increases in lease investments, hence the estimated average depletion of .06 per barrel for Kansas in 1937 is based essentially on the downward trend evidenced in Table 1.

Depreciation: Depreciation covers the amortization of tangible property, chiefly the material utilized in equipping wells. The Petroleum Administrative Board report indicates that the investment in tangible property in Kansas not written off at the beginning of 1935 was about $25,000,000. The average cost of equipping a well in Kansas in 1935 was about $9,800. From these data it may be computed that the write-off for depreciation in 1937 was about $8,000,000, or about 13 cents per barrel on company-interest oil.

Development cost: Intangible development costs are the cost of labor and supplies in drilling wells and otherwise developing the properties. For cost purposes up to the last 5 to 11 years most companies charged off development costs as an expense in the year in which it was incurred, but in recent years there has been a growing

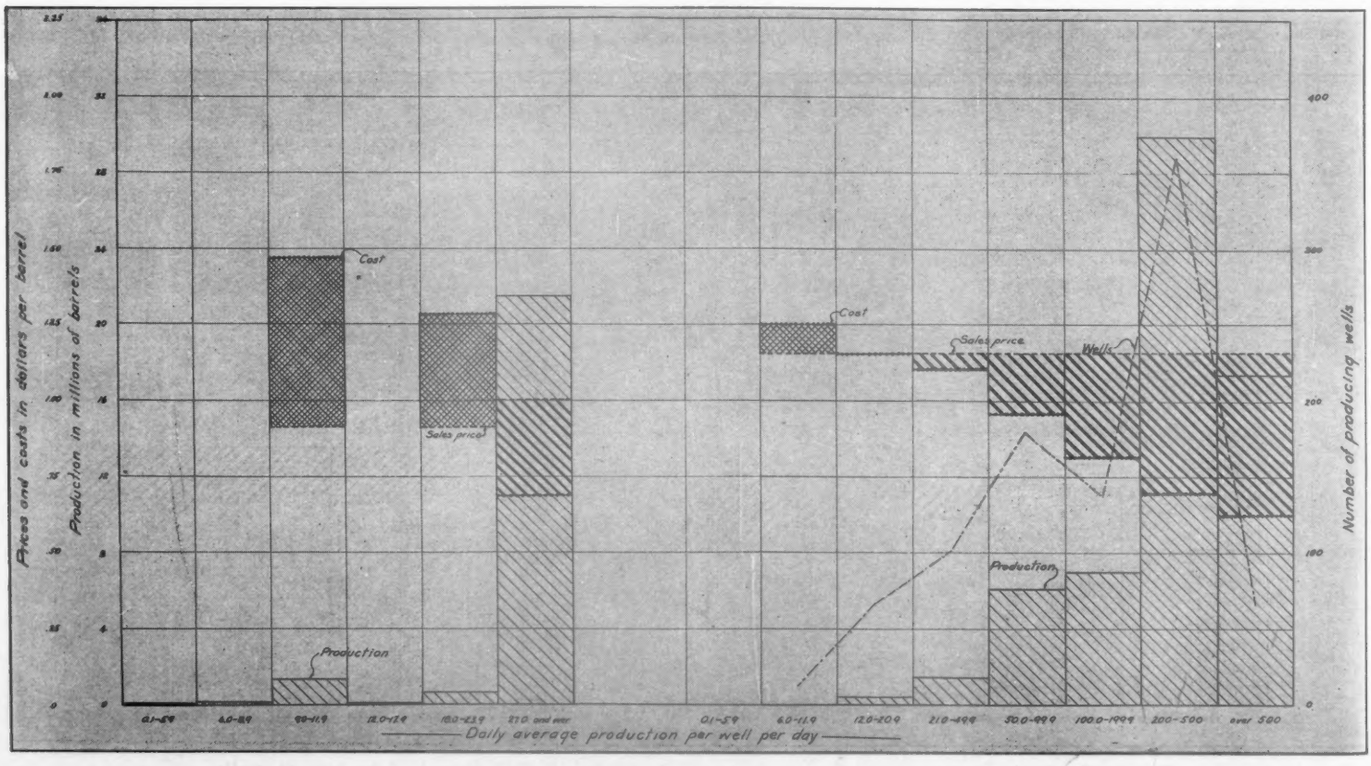


Fig. 2—Production, costs and prices in the Louisiana Gulf Coast in 1934 and 1937 classified by size of wells

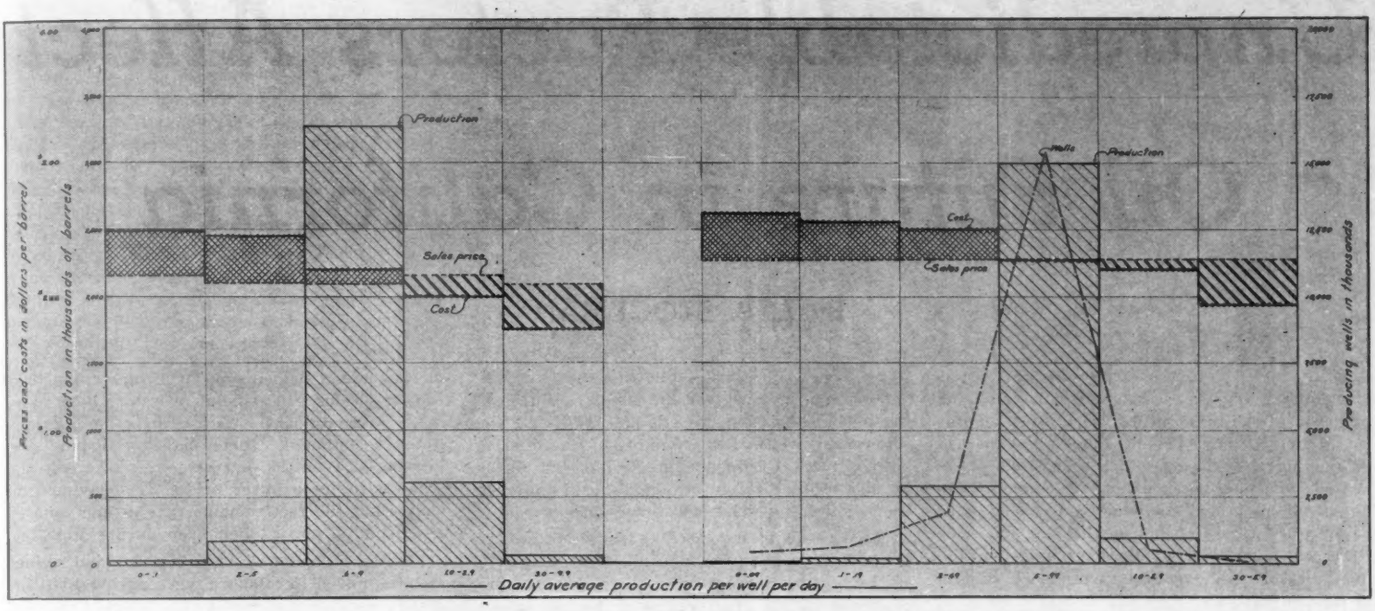


Fig. 3—Production, costs and prices in West Virginia in 1934 and 1937 classified by size of wells

tendency to consider it a part of capital and amortize it over a period of years. Nevertheless, individuals and small companies probably continue the write-off of drilling costs at a much faster rate than their properties are depleted. Investigating this angle the authors found that about a third of the wells drilled in Kansas are put down by "little fellows." However, many of these were in the stripper districts where a quick pay-off would not be expected. The pay-out period of the others was greatly deferred by proration. The subject lends itself to considerable speculation but as only a few cents per barrel are involved, it was decided to overlook the fact that all producers do not amortize over long periods.

There were 890 oil wells drilled in Kansas in 1935, 1,214 in 1936 and 1,867 in 1937. The 1935 wells cost about $10,400 each to drill; those in 1936 and 1937 probably cost progressively more as the average depth increased. Data on reserves in Kansas for this period are meager, but the general opinion seems to be that the increase in the total was about 50,000,000 bbls. per year. With these figures and the Petroleum Administrative Board averages through 1934 as a basis, it was calculated that the average development cost in Kansas in 1937 was about 15 cents per barrel, or about double what it was in 1934.

Operating expense: Operating costs, as the term implies, include the costs of labor, repairs, and supplies in actually producing oil. Somewhat more than half of the operating expense is for labor, hence it is important at this point to analyze the available data on total employment, wages, and hours.

According to data compiled by the Bureau of Mines, there were on the average 6,884 wage earners and 663 salaried workers employed in the oil fields of Kansas in 1935. Total wages and total salaries were $8,513,000 and $1,003,000, respectively. Similar data for 1936 and 1937 are not available, but indications are that the number of wage earners in 1936 increased 25 per cent over 1935. Very likely there was a further increase in employment in 1937, although it is doubtful if it came up to the gain in output of 21 per cent.

Comprehensive data on wages per hour and hours per week are not available since 1934. However, it is quite evident that there has been some increase in hourly rates in the industry, possibly 10 per cent in the three years. The trend in hours worked is even more obscure but the consensus of opinion is that the number per week has increased, due to the general increase of activity in the industry.

Evaluating these factors, and considering that new employes would receive less than average compensation, it is probably reasonable to assume that the charges for wages and salaries in Kansas increased from the $9,516,000 in 1935 to about $14,500,000 in 1937. Thus the labor cost per barrel can be assumed to have risen from $0.15 in 1934 to about $0.20 in 1937. However, some of this is classified under development cost and some, the salaries anyway, under overhead.

Although the other operating charges, that is, for repairs, fuel, supplies, insurance, and taxes increased materially in the three years, the charge per barrel probably declined, offsetting the rise in labor costs. The average operating cost in Kansas in 1937 was accordingly estimated as $0.26, or a fraction of a cent higher than in 1934.

Overhead: In its study the Petroleum Administrative Board set up the following items for overhead and administrative: (1) Salaries and office expense, (2) engineering and geological, (3) land and lease department, (4) dry holes, (5) lease rentals, (6) undeveloped leases canceled, (7) undeveloped leases amortized, and (8) "other" expenses, including taxes and insurance. The board did not compile overhead data for Kansas separately as most companies prorate such expense equitably over their entire production, irrespective of state boundaries, regardless of where the expenses were incurred.

Discussing the various items briefly, it is probable that the total expense for Items 1, 2, 3, 5 and 7 kept pace with production, forestalling a decline in the average for the five items. The expense for Item 6, cancelled leases, probably continued to decrease as there was no decline in leasing interest in Kansas and as the 10-year leases made just prior to the depression still have a year or more to run. The number of dry holes drilled in Kansas rose from 222 in 1934 to 606 in 1937, a gain of 173 per

(Continued on Page 85)

TABLE 2—COST PER BARREL OF PRODUCTION AND SALES VALUE IN THE LOUISIANA GULF COAST, 1931-34*, AND 1937†

Period—	Expenses						Miscellaneous revenue	Interest	Net cost	Average selling price
	Depletion	Depreciation	Development‡	Operating	Overhead§	Total				
1931	.060	.163	.027	.289	.342	.881	.016	.070	.035	.653
1932	.030	.118	.037	.241	.250	.676	.037	.057	.696	.835
First nine months of 1933	.035	.085	.058	.201	.226	.605	.023	.052	.634	.540
Last three months of 1933	.043	.108	.050	.245	.251	.697	.015	.045	.727	.988
1933	.037	.091	.056	.215	.231	.630	.020	.049	.659	.665
1934	.023	.089	.065	.219	.322	.718	.020	.055	.753	.990
1937	.020	.080	.090	.220	.280	.710	.020	.055	.705	1.150

*Petroleum Administrative Board. †Estimates by the authors. ‡Amortization intangible development cost. §General overhead and administrative.

TABLE 3—COST PER BARREL OF PRODUCTION AND SALES VALUE IN WEST VIRGINIA, 1927-30,* 1931-34,† AND 1937‡

Period—	Production§	Expenses						Miscellaneous revenue	Interest	Net cost	Average selling price
		Depletion	Depreciation	Development¶	Operating	Overhead‖	Total				
1927-1930	22,329,000	.500	.380	.340	.730	.580	2.530	.780	.460	2.210	3.160
1931	4,472,000	.091	.422	.123	1.182	.433	2.251	.477	.394	2.168	1.575
1932	3,876,000	.087	.429	.110	1.218	.360	2.204	.467	.393	2.130	1.572
First nine months of 1933	2,781,000	.063	.376	.105	1.138	.383	2.065	.445	.386	2.006	1.384
Last three months of 1933	1,034,000	.068	.376	.093	1.293	.374	2.204	.433	.371	2.142	2.113
1933	3,815,000	.064	.376	.102	1.178	.381	2.101	.442	.382	2.041	1.571
1934	4,095,000	.051	.354	.098	1.350	.351	2.204	.375	.284	2.113	2.089
1937	3,845,000	.050	.350	.090	1.550	.380	2.420	.350	.230	2.300	2.280

*U. S. Tariff Commission. †Petroleum Administrative Board. ‡Estimates by the authors. §Total production, including royalty oil considered as produced without cost. ¶Amortization of intangible development cost. ‖General overhead and administrative.

Unpredictable Factors Affect Oil Future in California

By L. P. STOCKMAN

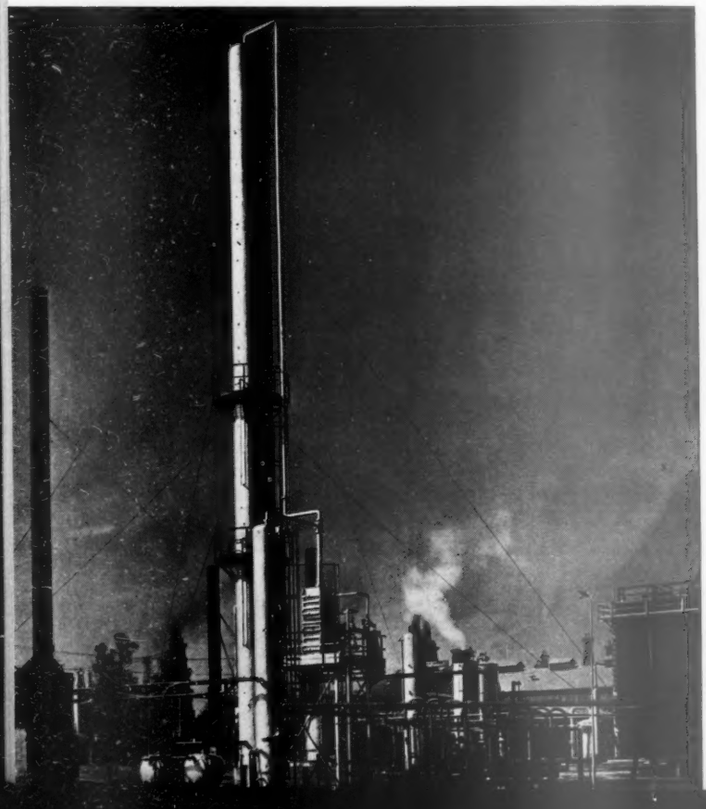
LOS ANGELES, Calif., July 11.—Considerable progress has been made in stabilizing conditions in California during the past few months and a further improvement should be recorded during the next three months as a result of increased consumption incident to the summer. Earnings of all integrated companies have been satisfactory during the first half of the year and since prices are fairly well stabilized earnings for the nine months should compare favorably with similar figures for 1937.

The outlook for the winter period, however, is clouded by a number of variable and unpredictable factors which will vitally affect future stability on the Pacific Coast. California does not have any legislative statutes governing regulation of production but operators have usually accomplished the same results by cooperative action whenever a crisis is reached. The present situation is an example of what can be accomplished by concerted action and while the desired objective has not been reached there can be no questioning that a very definite improvement has been made since the crisis was reached in February last.

Crude oil production, reflecting additional curtailment and clarification and modification of production practices in the Wilmington field and restriction of production and purchases in the Santa Maria Valley field, has been reduced gradually from an average high of 735,991 bbls. per day to a level approximating 675,000 bbls. daily. This has temporarily alleviated the storage situation which reached the critical stage following substantial accumulations late last year and which continued up through the first five months of 1938. At no time this year, however, has actual production of crude been reduced within striking distance of the allowable set by the Central Committee of California Oil Producers, official curtailment group.

As a result of increased consumption and decreased production, the monthly accumulation of stocks which has continued uninterrupted since September 1, 1937, has been progressively smaller since February 1 of the current year. During February, when crude production was highest and demand lowest, buyers found it necessary to store 5,843,381 bbls. of liquid stocks. Reflecting additional curtailment, the accumulation in March was reduced to 3,824,492 bbls. and further reduced to 2,599,656 bbls. in April. As a result of consistent improvement in the production situation, marketers found it necessary to store only 1,565,068 bbls. during May and from present indications the first draft on stocks since August of last year should occur during July.

R. D. Bush Oil Co. refinery, Long Beach, Calif.



Shipments

Offshore shipments have been a vital factor in the demand for California petroleum for several months and these abnormally high liftings have no doubt prevented a general collapse. It has been customary to use offshore shipments as a balancing factor but in the present situation foreign shipments have occupied a more prominent position.

Offshore shipments to foreign ports, principally to Japan and the Orient, were unusually large during the first five months but bogged down in June due to difficulties experienced in securing Japanese letters of credit without which California marketers will not load. At the close of June there were 16 Japanese and other chartered tankers in California ports awaiting the necessary letters of credit. Several of these vessels have been at anchorage for more than three weeks.

The Japanese credit situation is of special importance because it may have a pronounced effect on marketing conditions on the Pacific Coast later this year. Increased curtailment during May and June precludes any successful concerted attempt to precipitate a crisis by delaying purchases of crude and refined oil for export and hence any attempt along this line by foreign buyers is doomed to failure. A few months ago, a sudden drop in liftings might have caused serious concern but operators have since taken precautionary measures by effecting additional curtailment. There may not be any connection between the delayed letters of credit and a move to force lower prices by delaying purchases but the fact remains that liftings showed a substantial and sudden drop during June.

A total of 72,544,125 bbls. of crude and refined oil was moved to offshore ports during 1937 and if the present rate of movement continues the total for 1938 will exceed the past year. During the first five months of 1938 a total of 30,850,079 bbls. of crude and refined oil was moved to the East Coast for domestic consumption and to foreign ports. Intercoastal shipments to the Gulf Coast and Atlantic seaboard constitute only a small portion of the total moved offshore from California as during 1937 marketers shipped only 4,134,908 bbls. of gasoline and 1,765,032 bbls. of kerosene, asphalt and other refined oils to the East for domestic consumption. During the first five months of the current year California marketers moved only 1,370,533 bbls. of gasoline and 942,986 bbls. of other finished products to the East Coast for domestic consumption. Total Atlantic foreign shipments are running substantially lower this year due primarily to decreased shipments of kerosene, gas oil and diesel.

A very substantial decline has taken place in the movement of fuel oil to Pacific foreign ports but crude oil on the other hand has shown a substantial increase. This is in accordance with expectations as preliminary estimates indicated several months ago that crude oil liftings would be up and fuel oil liftings down. During the entire 12 months of 1937 a total of 16,612,568 bbls. of fuel oil was moved to Pacific foreign ports whereas only 4,645,395 bbls. have been lifted for this market during the first five months of the current year. California marketers sold 20,152,823 bbls. of crude oil to Pacific foreign buyers in 1937 and 13,461,009 bbls. during the first five months of 1938. Shipments of diesel, gas oil, gasoline, kerosene and other refined products to Pacific foreign markets are running substantially below similar liftings last year.

Part of this decline can be attributed to lower shipments of refined products to China which has always been a large buyer of kerosene. Russia on the other hand is purchasing more California gasoline, principally aviation gasoline, than heretofore and indications point to additional shipments during the next several months. Some of this gasoline undoubtedly is going into China through the back door to provide fuel for military planes and in view of Russian assistance to China it is assumed additional shipments of gasoline to Russia will be made later this year.

Field Operations

Field operations, reflecting the decision of Wilmington operators to retard development work and the unsuccessful efforts of Santa Maria Valley operators to dispose of current production, are running substantially below last year and from pres-

Wilshire Oil Co. refinery, Norwalk, Calif.

ent indications the total for the year will be lower than last year. If it was not for deep zone development in the Torrance field the present total would be very low because drilling in most other fields of the state is at a low ebb. R. D. Bush, state oil and gas supervisor, Department of Natural Resources, reports a total of 625 applications for permits to drill new wells in the state for the first six months of the current year as compared with a total of 811 at the same time last year. Deepening and redrilling jobs, reflecting deep zone development, show an increase over last year, 440 permits having been issued for the first six months of this year against 374 during the same period in 1937. There is little likelihood drilling operations will show any change between now and the end of the year as everything points to restricted operation.

Normal development can be expected in most of the settled fields and while drilling operations may show an increase in the Montebello and Torrance fields this will not be enough to offset decreased work in the Santa Maria Valley and Wilmington fields. Productive acreage in the Greeley, Ten Section, Canfield Ranch, Canal and Wasco fields is held by operators who do not desire to undertake aggressive development at present and the tendency will be towards a lower amount of work. Acreage in the Rio Bravo field is held in large blocks by reputable operators and only normal drilling will be undertaken. There has been a very marked change in the average drilling depth during the past month or two due to deeper drilling at Greeley, Ten Section, Canal, Rio Bravo and Wasco. Earlier in the year Santa Maria Valley and Wilmington had a tendency to reduce the average drilling depth but with the starting of additional wells in the deep fields and a slowing of development work at Santa Maria Valley and Wilmington the average completion depth has shown a substantial rise.

Marketing Conditions

The chief problem confronting California marketers at present is finding a market for fuel oil at prices that justify liquidation of present excessive stocks. If a large portion of this refinery residuum could be sold for export it would place marketers in a more favorable liquid state and increase the net back from each barrel of crude oil processed. The general business depression greatly affected the demand for fuel oil and this together with a crude production greatly in excess of requirements has resulted in a consistent increase of stocks since July 1, 1938.

Fuel oil prices were reduced 10 cents per barrel at Los Angeles Harbor and San Francisco late in December, 1937, and a second reduction of a similar amount was posted in May, 1938, but these reductions have not had any great tendency to stimulate consumption. Bunkering business is at a low ebb due to decreased movement of vessels and the transfer of many intercoastal boats to the East Coast for operation between New York and other shipping centers and the South American trade.

Gasoline prices have remained steady in the retail trade but the spot market has shown a vacillating tendency with a trend toward softness. With the advent of warm weather the spot market has shown a strengthening and will probably firm up within another few weeks. Gasoline stocks are too high to expect a strong market this year especially in the face of the present heavy production of crude. It is the general expectation existing prices of crude and refined oil will remain pegged at their present levels for three months but marketers are rather reluctant to contemplate probabilities for the latter part of the year.

The allowable crude oil production for June and July was fixed at 615,000 bbls. by the Central Committee and on this basis the allotment for November and December will probably be severely reduced. This is especially true since actual production has never been reduced to the established volume. Operators failed to curtail production enough earlier this year and will be obliged to clamp the lid rather tight during the winter months when the demand is lower because marketers will not and cannot continue to store fuel oil at the rate prevailing during the first four or five months. Richfield Oil Corp. recently sold 1,000,000 bbls. of fuel oil to the Imperial Japanese Navy for delivery within four months but with this exception the fuel oil market has been exceptionally quiet with a definite tendency toward lower prices.

Outlook

As the situation stands it would appear price revisions can be expected before the close of the year unless drastic steps are taken to make curtailment more effective. With actual production running about 50,000 bbls. per day in excess of the allowable there is a lot of room for improvement.

TANKER SHIPMENTS FROM PACIFIC COAST TERRITORY

(In barrels of 42 U. S. gallons)

	Intercoastal		Pacific foreign					Atlantic foreign		
1937—	Finished gasoline	All other products	Crude oil	Fuel oil	Diesel and gas oil	Finished gasoline	All other products	Finished gasoline	All other products	Total
January	195,950	146,967	1,420,776	1,424,214	921,063	650,521	234,713	570,369	723,730	6,288,303
February	116,768	105,918	1,421,456	1,021,070	373,223	571,792	175,322	504,175	456,965	4,746,689
March	205,582	148,651	1,689,369	1,692,988	654,110	654,829	350,486	262,808	318,925	5,977,748
April	593,154	71,541	1,138,215	1,472,335	441,660	758,115	440,085	532,510	116,479	5,564,094
May	467,764	137,016	1,611,012	1,480,869	937,846	694,986	215,452	320,899	270,487	6,136,331
June	711,072	197,424	1,468,445	1,723,210	832,537	442,449	365,248	210,318	383,722	6,334,425
July	372,847	138,709	1,516,050	1,459,126	607,740	1,166,868	518,892	536,120	827,026	7,143,378
August	531,363	72,750	1,713,681	1,452,315	1,033,087	891,786	424,808	391,103	589,961	7,100,854
September	313,112	211,130	1,875,227	1,247,354	629,935	815,524	422,942	183,136	136,948	5,835,308
October	370,993	134,914	1,874,466	1,216,822	653,395	735,004	340,072	212,789	224,298	5,762,753
November	203,430	77,376	2,300,565	1,306,988	631,536	728,252	298,129	483,766	558,392	6,588,434
December	52,873	322,636	2,123,561	1,115,277	653,292	395,151	175,940	.....	227,078	5,065,808
Total year 1937	4,134,908	1,765,032	20,152,823	16,612,568	8,369,424	8,505,277	3,962,089	4,207,993	4,834,011	72,544,125
1938—										
January	265,344	313,240	2,879,152	651,758	471,356	530,883	170,338	300,675	165,621	5,748,367
February	81,020	.....	1,741,648	884,358	507,439	741,795	182,498	211,947	4,583	4,355,288
March	204,242	218,273	3,066,852	1,114,878	742,648	705,705	130,740	252,410	189,360	6,625,108
April	389,616	203,167	3,026,045	871,086	693,013	847,108	287,476	454,166	210,571	6,982,248
May	430,311	208,306	2,747,312	1,123,315	696,086	976,834	277,349	420,660	258,895	7,139,068
June	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total first half 1938	1,370,533	942,986	13,461,009	4,645,395	3,110,542	3,802,325	1,048,401	1,639,858	829,030	30,850,079

Water Flood Area Curtailment Urged in Bradford-Allegany

By J. P. O'DONNELL

Following one full year of steadily declining prices and mounting inventories, efforts to bring production of Pennsylvania Grade crude oil and refined products within the limits of demand are now being reflected in current statistics which show decreases in both crude production and run to stills. Refined prices began falling a year ago and refined products inventories began rising at the same time. Crude oil stocks likewise began to rise in June of 1937 and were still climbing in June, 1938, though they were already up almost 25 per cent. Crude prices, cut for the first time on September 1, were reduced for the fifth time on June 13.

Efforts to curtail crude oil production are centered in the Bradford field where 56 per cent of the Pennsylvania Grade crude produced in 1937 originated. A reduction of approximately 5,350 bbls. per day has been effected in this field but this amount is still short of the ultimate goal. During the first 25 days of June production in the Bradford field averaged an estimated 40,580 bbls. per day against 45,859 bbls. during 1937.

Curtailment efforts were inaugurated in this field April 1 when four refinery buyers, Kendall Refining Co., Quaker State Oil Refining Corp., United Refining Co. and Bradford Oil Refining Co., announced a reduction in acceptances to 85 per cent. A month later this was reduced to 75 per cent and the Bradford Transit Co., largest gatherer in the field, announced that, effective May 1, it would accept crude from producers only for immediate shipment. On May 1 announcement was made by Vacuum Oil Co., of Olean, that it would accept 20 per cent and on June 1 South Penn Oil Co. and Tide Water Associated Oil Co. announced they would take but 75 per cent of the base amount stipulated in their contracts with producers.

Late in May the Bradford Oil Refining Co. announced it would pay for crude partly in cash and partly in scrip.

Under the leadership of Harry M. Ryder, president, the Bradford District Pennsylvania Oil Producers Association, is also taking an active part in trying to effect a reduction in the field's production. Confident the program will eventually effect a curtailment of 10,000 bbls. per day, the association is trying several methods to attain this end. Among these is the mailing of 8½ by 11-inch brightly colored placards to each producer in the field calling his attention to the effects of overproduction and increasing surpluses and urging him to cut back production to "save your shirt," the slogan adopted for the drive. These cards are mailed to all Bradford producers three times a week.

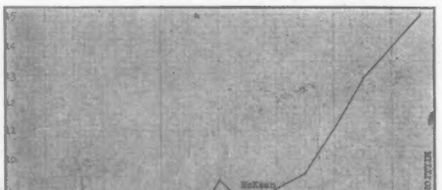


Figure 1

Another method, and one of far greater importance, was the directing of its research staff to the study of the effects of curtailment in a water flood field. It has long been held that the interruption of a water flood would reduce ultimate recovery and adversely affect efficiency. However, the association's research staff will soon publish a report which has just been completed showing that "no appreciable quantity will be lost by reason of curtailment." The report, prepared by Dr. S. T. Yuster, director of water flood research at the Pennsylvania State College laboratory, was published in the July issue of the association's publication and has been distributed among all producers in the field.

Some of the conclusions which the exhaustive and detailed report will present are: "Production will be deferred because of curtailment and the time will depend upon the total production during curtailment and the normal production of the property," and "Application of a back-pressure conserves the energy in the formation making the property respond more quickly upon reapplication of normal operating conditions." The report also goes into the different methods of applying curtailment in a water flood field and, in pointing out that no ill effects will result, answers the principal objection to curtailment in the Bradford field.

Though a 10 per cent curtailment was instituted by Sinclair Refining Co. in the Allegany, N. Y., field on September 1, coincident with the first cut in crude prices, reduction efforts have been confined principally to the Bradford field, 90 per cent of which lies in McKean County, Pennsyl-

(Continued on Page 30)

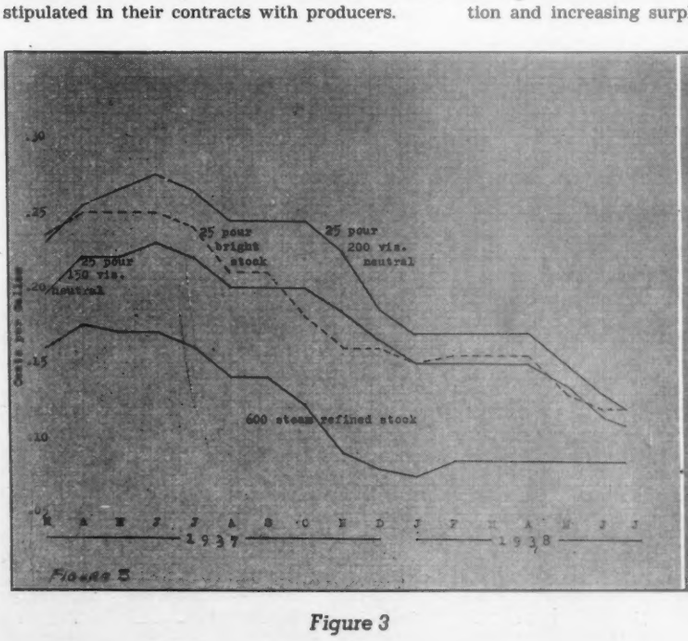


Figure 3

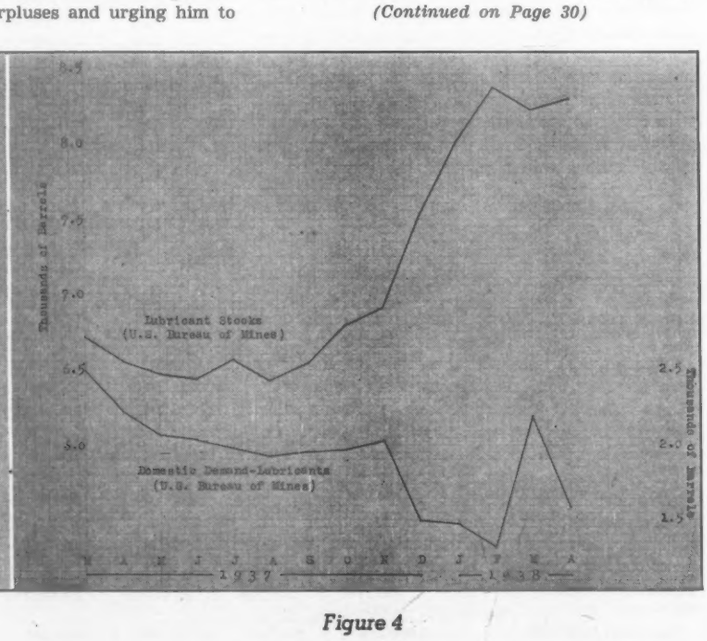
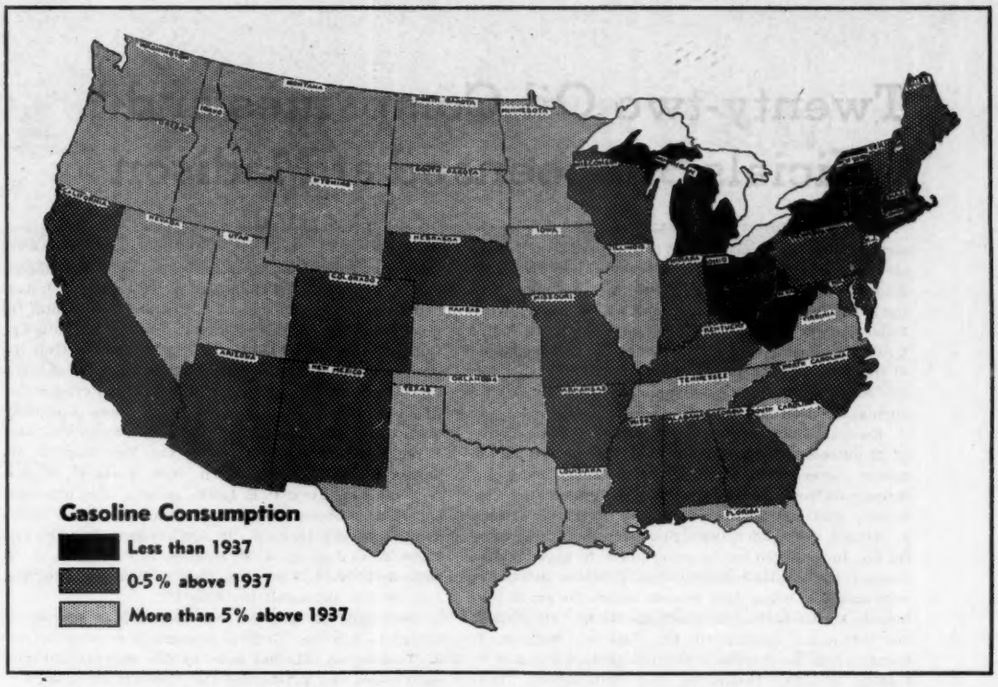


Figure 4

DEMAND FOR GASOLINE UP 2.8 PER CENT



By W. T. Ziegenhain

The United States, as a whole, consumed 2.8 per cent more gasoline in the first four months of this year than in the same period a year ago. This was accomplished despite important declines in the consumption of seven states. The latter might be classed as industrial states, and the lesser volume of gasoline consumed appears to be a reflection of the greatly curtailed industrial activities generally.

The comparison between this year and last is based upon the tax reports of the individual states. These have just been made available through the A.P.I., and the consumption of 52,093,000 gallons reported daily by this method compares with an indicated consumption of 53,382,000 gallons daily by the Bureau of Mines earlier. Actually, however, the two reports appear to check very well, as the difference of slightly more than a million and a quarter gallons daily is less than 3 per cent of the total. Furthermore, the Bureau of Mines data are based upon shipments of gasoline from refineries, including some special naphthas. On the other hand, the tax report total may be below actual consumption because of unreported, tax-exempt material.

Taking either figure as the average daily consumption of gasoline in the United States, some idea of this tremendous volume may be gained by comparing it to that of a building. For example, each day the volume of gasoline consumed is equal to that of a seven-story structure covering half of an ordinary city block. The volume would require the capacity of 15 of the largest ocean tankers to move it by water, or 6,500 tankcars to move it by rail. Transporting this volume of material from the various refining centers to the consuming points is an important job in itself.

It is significant that gasoline consumption declined in states which are served by refineries within their borders or by refineries in adjoining states. The states to record declines include Ohio, Michigan, West Virginia, New York, Massachusetts, Rhode Island and Connecticut. The relationship between the 1938 and 1937 consumption figures may be seen in the accompanying table in each case.

It is significant also that the great bulk of the area west of the Mississippi River witnessed more than average increase in gasoline consumption. The north half of the United States, west of the Mississippi, shows the most consistent gain. The next most important area to show a consistent gain runs through the central portion of the country from north to south. In all of these states the consumption this year has been 5 per cent or more above a year ago with the exception of Arkansas, Missouri and Nebraska.

The consumption of gasoline over the balance of the year is expected to increase well beyond this daily average and the nation as a whole is expected to report a general increase of about 3 per cent. While it is hazardous to predict gasoline consumption over the future by states or areas, it seems well within reason that the seven industrial states cited here will produce a better record in the latter half of 1938 than in the same period of 1937. This is particularly applicable to Michigan. In that state the automobile industry started curtailing operations early in the latter half of 1937 and as that year drew to a close, operations were comparatively low. In contrast with this situation the automobile industry anticipates a greatly expanded business in 1939 and the work of producing new models for the coming year is being speeded up to near a normal level. Similarly situated are the steel mills of Ohio, the testile mills of Massachusetts, Connecticut and Rhode Island and the thousands of industrial plants of New York.

GASOLINE CONSUMPTION BY STATES

Based upon tax reports compiled by A.P.I.

STATE	CONSUMPTION FIRST 4 MONTHS		CONSUMPTION INCREASE	
	1938 gallons	*1937 gallons*	*Gallons*	*Per cent*
Alabama	72,113,000	69,143,000	2,970,000	4.3
Arizona	33,407,000	32,403,000	1,004,000	3.2
Arkansas	49,635,000	48,195,000	1,440,000	3.0
California	544,819,000	539,206,000	5,613,000	1.0
Colorado	63,537,000	60,879,000	2,658,000	4.3
Connecticut	89,524,000	90,736,000	*1,212,000	*1.3
Delaware	15,512,000	15,468,000	44,000	0.3
District of Columbia	43,080,000	41,633,000	1,447,000	3.5
Florida	127,526,000	121,177,000	6,349,000	5.2
Georgia	107,236,000	103,122,000	4,114,000	4.0
Idaho	23,812,000	21,261,000	2,551,000	11.9
Illinois	384,665,000	364,325,000	20,340,000	5.6
Indiana	185,260,000	182,384,000	2,876,000	1.6
Iowa	150,607,000	137,263,000	13,344,000	9.8
Kansas	130,747,000	123,936,000	6,811,000	5.5
Kentucky	75,451,000	74,377,000	1,074,000	1.4
Louisiana	76,342,000	71,671,000	4,671,000	6.5
Maine	34,221,000	33,083,000	1,138,000	3.4
Maryland	80,470,000	76,657,000	3,813,000	5.0
Massachusetts	188,976,000	193,332,000	*4,356,000	*2.2
Michigan	298,933,000	315,170,000	*16,237,000	*5.1
Minnesota	143,854,000	127,828,000	16,026,000	12.5
Mississippi	58,528,000	56,918,000	1,610,000	2.8
Missouri	178,955,000	171,160,000	7,795,000	4.6
Montana	31,364,000	29,782,000	1,582,000	5.3
Nebraska	66,165,000	65,418,000	747,000	1.1
Nevada	9,795,000	8,976,000	819,000	9.1
New Hampshire	21,179,000	20,987,000	192,000	0.9
New Jersey	241,054,000	233,451,000	7,603,000	3.3
New Mexico	26,837,000	25,839,000	998,000	3.9
New York	500,530,000	504,229,000	*3,699,000	*0.7
North Carolina	121,924,000	118,777,000	3,147,000	2.7
North Dakota	34,308,000	29,092,000	5,216,000	17.9
Ohio	381,253,000	388,937,000	*7,684,000	*1.9
Oklahoma	118,148,000	110,932,000	7,216,000	6.5
Oregon	62,952,000	59,219,000	3,733,000	6.3
Pennsylvania	403,947,000	401,628,000	2,319,000	0.6
Rhode Island	33,625,000	35,222,000	*1,597,000	*4.5
South Carolina	61,788,000	58,596,000	3,192,000	5.4
South Dakota	35,914,000	29,288,000	6,626,000	22.6
Tennessee	88,316,000	81,166,000	7,150,000	8.8
Texas	395,186,000	365,617,000	29,565,000	8.9
Utah	25,538,000	24,198,000	1,340,000	5.5
Vermont	15,611,000	15,233,000	378,000	2.4
Virginia	105,608,000	98,532,000	7,076,000	7.2
Washington	95,537,000	89,490,000	6,047,000	6.7
West Virginia	56,023,000	56,790,000	*767,000	*1.3
Wisconsin	145,887,000	143,728,000	2,159,000	1.5
Wyoming	15,484,000	14,701,000	783,000	5.3
Total	6,251,183,000	6,081,155,000	170,028,000	2.8
Daily average	52,093,000	50,676,000	1,217,000	2.8

*Decrease.

Twenty-two Oil Companies and Officials Subpoenaed at Madison

MADISON, Wis., July 12.—Testimony will not be started until next week in the new investigation of the oil industry. General criminal cases, U. S. Attorney John J. Boyle said, will require a week or more. That the grand jury session may be long was evidenced when Judge Patrick T. Stone excused one juror until August 1, with instructions to be available for the remainder of that month. J. H. Lewin, prosecutor, will arrive July 15. None of the witnesses subpoenaed so far for the oil investigation had appeared here today.

Federal court officials have announced the names of 22 oil companies and individuals subpoenaed as witnesses. Several of these were corporate and individual defendants convicted in the gasoline price-fixing conspiracy trial last January. Heading the list is Charles E. Arnott, New York, vice president, Socony-Vacuum Oil Co., Inc., alleged by the government to have "master minded" the surplus buying program. Others summoned with orders to bring their records before the grand jury include Martin G. Peters, Wadhams Oil Co., Milwaukee; Joe Schmucke, Jackson Oil Co., Jackson, Miss.; A. F. Richter, Phillips Petroleum Co., Des Moines, Iowa; R. D. Collins, Phillips Petroleum Co., Indianapolis, Ind.; Charles S. Smith, National Refining Co., Cleveland, Ohio; Robert W. McDowell, vice president, Mid-Continent Petroleum Corp., Tulsa; J. F. Adams and H. M. Edinger, formerly of Barnsdall Refining Co., Tulsa; Harry J. Kennedy, vice president, and L. T. Cramer, Continental Oil Co., Ponca City, Okla.; Paul Kristy, National Refining Co., Dubuque, Iowa; Gulf Oil Corp., Pittsburgh, Pa.; Gulf Refining Co., Pittsburgh; Barnsdall Refining Co., Tulsa; National Refining Co., Cleveland; Globe Oil & Refining Co., Blackwell, Okla.; R. G. A. van der Woude, president, Shell Union Oil Corp., New York City; Texas Co., New York; Tide Water Associated Oil Co., New York; J. W. Carnes, Consolidated Oil Corp., New York; F. W. McDermott, New York; P. E. Lakin, general sales manager, and R. D. Ebbert, tankcar sales manager, Shell Petroleum Corp., St. Louis; L. B. McCammon, Ohio Oil Co., Tulsa; R. C. Jopling, A. M. Hughes, L. P. Calkins, E. M. Kelly and Fred L. Koopman, Phillips Petroleum Co., and J. C. Evans, Barnsdall Refining Co.

Hammond E. Chaffetz has resigned as special assistant to Attorney General Cummings to practice law in Washington. He has been in the antitrust division eight years and prosecuted the Madison oil cases.

Clinger Reelected President Of Pennsylvania Grade

OIL CITY, Pa.—W. F. Clinger, of Warren, was reelected president of the Pennsylvania Grade Crude Oil Association at the annual meeting of directors here. It is the second term for Mr. Clinger who is president of Clinger Oil & Gas Co. of Tidioute, and vice president and treasurer of Superior Oil Works, Warren.

W. F. CLINGER

At the same time the directors decided to hold the 1939 meeting of the association at Pennsylvania State College, headquarters of its production and refining research. The return to State College follows a two-year lapse. The 1937 meeting was held on a Great Lakes cruise and the 1938 meeting in Pittsburgh.

Other officers elected were: Parker L. Melvin, Towne-Melvin Oil Co., Bradford, and Otto Walchli, Wellsville, N. Y., vice presidents; John A. Beck, Pennsylvania Refining Co., Butler, recording secretary; S. Messer, Quaker State Oil Refining Corp., Oil City, treasurer; W. R. Reitz, assistant treasurer, Quaker State Oil Refining Corp., Oil City; Fayette B. Dow, Washington, D. C., general counsel; J. E. Moorhead, Oil City, executive secretary, and S. A. Hartwell, Jr., Oil City, assistant secretary.

All the directors were reelected with the exception of Mr. Walchli who became a member of the board at the recent annual meeting.

Would Reduce Import Tax On Venezuela Crude

WASHINGTON, D. C., July 12.—The state department today announced negotiations of trade agreement with Venezuela which will include consideration of reducing the excise tax of one-half cent per gallon on crude petroleum and fuel oil, but not the excise tax on gasoline. This indicates, despite conflicting legal views, the department feels it has authority to reduce import excise taxes like customs duties. Briefs are due August 6 and hearings open August 15.

I.P.A.A. Meetings in July Announced by Buchner

Four state meetings of the Independent Petroleum Association of America were announced by C. E. Buchner, Tulsa, executive manager, as follows: Artesia, N. M., July 22, C. J. Dexter, vice president; Shelby, Mont., July 23, W. M. Fulton, vice president; Casper, Wyo., July 26, V. M. Kirk, director, Cody, Wyo.; Denver, Colo., July 26, Warwick M. Downing, vice president. The executive committee of the association will meet at Colorado Springs, July 28, preceding the meeting of the Interstate Compact Commission July 29 and 30.

National Resources Committee to Make Survey of Oil Reserves

WASHINGTON, D. C., July 12.—A survey of all power resources of the nation including the petroleum reserves and relation of oil to other power sources, is under way by the national resources committee at the request of President Roosevelt. The survey had its inception, in part, in the attempt last spring of Representative Boland to tax fuel oil as a conservation measure. It is understood that at that time President Roosevelt planned a message to congress on oil reserves but instead asked Secretary Ickes as chairman of the resources committee to obtain further information on fuel and power reserves and their conservation and use.

Funds for the survey became available July 1, and it is in immediate charge of Ralph J. Watkins, University of Pittsburgh professor. No new field work is planned and report will be made next winter on the basis of data possessed by government agencies, including the Bureau of Mines, Power Commission, Coal Commission, Geological Survey, Petroleum Conservation Division, and others. Details are guarded, but in general the survey will cover estimate of all present energy resources, how these are now used, and especially problems of conservation and regulation, including the relationship between oil, gas, coal and water power and their competitive problems.

NAMED CHIEF GEOLOGIST

MAURICE TEIS

Maurice Teis has been appointed chief geologist of the Home-Stake Oil & Gas Co. by President J. R. Simpson, succeeding J. K. Murphy who resigned recently to join British American Oil Producing Co. Mr. Teis is a brother of K. R. Teis, chief engineer for E. H. Moore, Inc., and has been with the Moore company as petroleum engineer and geologist. Born in Anadarko, Okla., he graduated from the University of Oklahoma in 1930 with bachelor's degree and received his master's degree at the University of Chicago in 1931. His first work was with Phillips Petroleum Co. until he joined E. H. Moore, Inc., in 1935 working in the Fitts pool, Oklahoma, and in western Kansas.

THE MARKETS*

CRUDE OIL: *Elk Basin and Grass Creek crudes (light) were reduced 25 cents per barrel by Standard of Indiana, which refines the crudes at its Greybull, Wyo., refinery. Same company announced 50 per cent reduction in its Casper, Wyo., refinery operations. Both developments reflect better position as regards transportation to markets of crude produced in other fields. Crude market generally steady.*

REFINERY: *Gasoline shipments increasing, with price levels unchanged. Natural gasolines high in the Mid-Continent. Improved shipments of distillates, gas oils and residual fuels reported in several areas.*

TANK-WAGON AND POSTED DEALER: *Mixed developments. Higher gasoline prices at several points in Tennessee and Louisiana. Reductions at scattered points in other states.*

FINANCIAL: *Oil stocks hold advances of previous two weeks. Average of 30 representative stocks for week ending July 9: High, 31.49; low, 29.90; close, 30.73. Week ending July 2: High, 31.12; low, 28.53; close, 30.91.*

**Detailed information in market section.*

the OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published weekly by The Petroleum Publishing Company at Tulsa, Oklahoma

Bankrupt Policy

After nearly four months of oil expropriation in Mexico has not the time arrived for the United States government to put into effect its "good neighbor" policy so widely publicized since the fall of 1936 following President Roosevelt's "good will" trip to South America?

It would seem that the issues involved in the seizure of the oil properties by the Mexican government can no longer be ignored by the government at Washington.

As the situation stands, the action on the part of the Mexican government was confiscation and not expropriation. No valid attempt has been made to pay for the properties seized and apparently Mexican political leaders have no present intention of doing anything more in the future than they have in the past.

Indicative of the danger of this situation President Cardenas has called upon other Latin American countries to follow the lead of his country, applying it not only to oil but to all foreign investments. At least two of these countries have indicated their willingness to follow Mexico's example.

These foreign investments in Latin America, amounting to ten billion dollars, (about half of which was sent from this country), are involved in the developments which have followed the action of Mexico.

But more is involved than these outside investments in oil and other industrial and business activities in these countries. Actually the peoples of these Latin American nations have more at stake than those who have spent hundreds of millions in developing their natural resources and manufacturing enterprises.

Mexico has quickly found out, through the reduced value of its money, impaired credit, unemployment and general stagnation of business and reduced revenue, that its business activities are closely tied in with the industry and trade fostered across the border by outside capital.

It is impossible for these countries to seize arbitrarily the properties developed by outside interests without paying a penalty and their own people suffering. There is evidence that the thinking people of these countries realize this.

Is it not the immediate duty of Washington to put its "good neighbor" policy into practical application so that not only will rights of its own nationals be protected according to international law but that at the same time the real interests of its neighbors shall be protected to the end that they can continue to improve their standard of living made possible largely through foreign enterprise?

The situation in Mexico presents an exceptional opportunity for the application of this policy. Failure to offer our good offices in an attempt to secure a settlement makes farcical our claims regarding the fostering of good feeling with our neighbors to the south with its objective of uniting the two Americas in cooperative effort for mutual welfare.

A good neighbor policy must be reciprocal. There is the same compulsion on Mexico to be a good neighbor as upon us. President Roosevelt stressing the policy specifically to the American Republics in his World's Fair address said "it is multilateral, not unilateral." Virtual confiscation of American property is vastly different from expropriation which under international law requires prompt payment.

If the Mexican government thinks as highly of the Washington administration as reported it should be ready to listen to neighborly advice which present conditions in Mexico show to be needed badly.

A policy which is helpless to cope with the situation in Mexico and the threat it implies in other countries must be bankrupt indeed.

Obituaries

G. A. ZANZOT, 55, treasurer of Universal Consolidated Oil Co., fell to his death from the ninth floor offices of the company in the Subway Terminal Building, Los Angeles. He had been with the company 22 years.

HAROLD WALKER, 60, assistant to the general counsel of Standard Oil Co. of New Jersey, died July 7. Born in Rutland, Vt., he became associated with Mexican Petroleum Co. in 1903 and later helped to found the Huasteca Petroleum Co. He became vice president of Pan American Petroleum & Transport Co. in 1925 and joined Standard Oil in 1932 when it took over the foreign interests of Pan American. He was attached to the Standard office at Washington, D. C.

WALTER SMITH SUGDEN, 58, died in Sistersville, W. Va., July 7, following a stroke. He was a native of Amsterdam, N. Y., and was a member of the law firm of Kimball & Sugden, Sistersville, identified in oil litigation in the eastern district for more than 30 years. He graduated from Phillips Academy, Andover, Mass., in 1899, Harvard, 1903 and Harvard Law School, 1906. He moved to Sistersville in 1906 and formed a partnership with Charles N. Kimball, a classmate at Phillips Academy.

GEORGE E. EMMONS, 80, formerly manager of the Schenectady works of General Electric Co. and later vice president in charge of manufacturing, died in Pasadena, Calif., recently.

LOGAN W. CARY, 54, Oklahoma City oil man, died July 7. He moved to Oklahoma City in 1919 from Louisville, Ky., to enter the service of Oklahoma Gas & Electric Co., of which he was manager of the gas department when he resigned in 1928 to establish his own firm, the present Consolidated Gas Utilities Corp. He also was president of Wickliff Oil Co., Carson Petroleum Co., and Natural Gas Development Corp.

JOHN JOSEPH HARVEY, 63, prominent Titusville oil man, died July 5. He was born in Oil City, and first employed at 15 years as a messenger for Western Union Telegraph Co. He later entered the telegraph department of National Transit Co. and worked for about 10 years for the Joseph Seep Purchasing Agency. He was later employed by National Fuel Gas Co. He was married to Miss Alice G. Seep, daughter of the late Joseph Seep.

He was interested in producing leases in the Pleasantville field and was one of the organizers of Oil Creek Refining Co.

C. F. CAMP, 43, Tulsa oil man, died July 11 in a Tulsa hospital despite the amputation of a leg last week. He was taken to the hospital July 7 for the operation on his leg injured while playing football more than 25 years ago. He was born in Roanoke, Va. After the war, in which he served as an engineer, he came to Tulsa, starting in the oil business with Keystone Lubricating Co., but soon established the C. F. Camp Co. He was secretary-treasurer of Arrow Drilling Co. and an independent oil producer as well as representative of several manufacturing firms.

C. F. CAMP

J. D. HUFFMAN, 75, a veteran oil operator in Kansas, Oklahoma and Ohio, died last week at his home at Coffeyville, Kans. Mr. Huffman went to Kansas in 1908 from his former home at Bradner, Ohio. In 1918 he was instrumental in opening the Delaware pool and the Newcomb pool near Nowata, Okla. More recently he has been associated with operations around Coffeyville. Fowler Huffman, Wichita oil man, is a son.

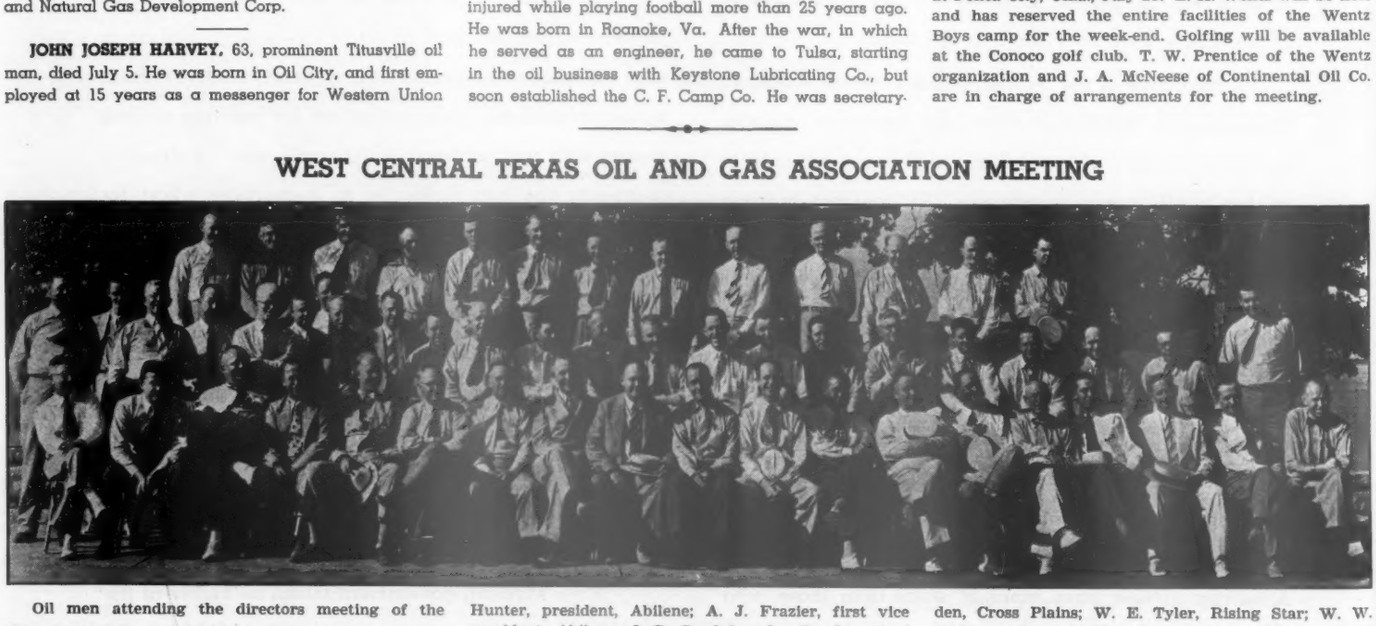
RAYMOND A. MARCH, 40, drilling engineer with Shell Oil Co., died recently following an operation for appendicitis. He was born in Hill City, S. D., and graduated from the South Dakota School of Mines, holding the degrees of B.S. Metallurgical Engineering and M.E. He read several papers before the A.P.I. particularly on rotary mud problems. He joined Shell in 1923 as rodman, became assistant chief field engineer in 1932, and visited Europe, Trinidad and Venezuela, studying drilling problems.

ELMER E. BRYNER, 76, of Custer City, Pa., one of the pioneer operators in the Bradford oil field, died last week. He was born at Cranberry, Venango County, Pennsylvania, received his education in the public schools at Pleasantville, Pa., and as a boy began work in the oil fields in Pithole. Removing to Bradford in 1877, he entered the employ of Quintuple Oil Co., Lewis Emery, Jr., interest, later becoming manager of all oil interests of the Emery company. At the time of his death, he was superintendent of the Minard Run Oil Co.

CHARLES M. HERRING, an engineer formerly employed by Standard Oil Co. of California, and his wife were killed when a launch of the California-Texas Oil Co. exploded near Bahrein Island in the Persian Gulf. They had been in Iran for two years.

The July meeting of the petroleum industry tax representatives, Kansas-Oklahoma area, will be held at Ponca City, Okla., July 25. L. H. Wentz will be host and has reserved the entire facilities of the Wentz Boys camp for the week-end. Golfing will be available at the Conoco golf club. T. W. Prentice of the Wentz organization and J. A. McNeese of Continental Oil Co. are in charge of arrangements for the meeting.

WEST CENTRAL TEXAS OIL AND GAS ASSOCIATION MEETING



Oil men attending the directors meeting of the West Central Texas Oil and Gas Association at Brownwood, Tex. Approximately 40 of the 50 board members were there, together with local business men and guests. This association has almost doubled its membership during the past four months.

Bottom row: R. L. Ponsler, Cisco; Wendell Bedichek, Abilene; Neil K. Shaw, Brownwood; Bruce Francis, Abilene; Harold G. Neely, Fort Worth; R. M. Wagstaff, Abilene; Ralph G. Fleming, second vice president, Albany; E. E. Kirkpatrick, Brownwood; J. C. Hunter, president, Abilene; A. J. Frazier, first vice president, Abilene; J. D. Sandefer, Jr., Breckenridge; Lloyd R. French, Tulsa; George Callihan, Albany; R. M. Ragsdale, Brownwood; Alex Clark, Coleman; J. H. Sedwick, Albany; F. M. Gwin, Odessa; J. C. Watson, assistant to the president, Abilene; W. Lee Watson, Brownwood.

Middle row: Unidentified; C. M. Ellis, Abilene; Ike Killough, Eastland; A. H. Rhodes, Eastland; W. D. Gulley, Brownwood; A. B. Davis, Lubbock; John Kelley, Breckenridge; J. D. Hassell, Jr., Lubbock; S. E. Cone, Lubbock; W. H. Clegg, Breckenridge; T. S. Holden, Cross Plains; W. E. Tyler, Rising Star; W. W. Wallace, Cisco; Marion Harvey, Cross Plains; J. E. Whiteside, Brownwood; unidentified; Joe A. Clarke, Albany; unidentified; John Morgan, Dallas; A. M. Howsley, Albany; Berry Brown, Abilene; George C. Gibbons, Dallas; Ellis A. Hall, Abilene.

Top row: Unidentified; Luther Belew, Abilene; Bill Pitzer, Breckenridge; Paul W. Pitzer, Breckenridge; unidentified; W. D. Cunningham, Brownwood; E. A. Ungren, Abilene; unidentified; Malcolm M. Meek, Abilene; W. E. Benson, Hamlin; W. C. Russell, Hamlin; Bowen Pope, Hamlin; Lloyd F. Adams, Stamford.

Expropriation Held Plain Confiscation

Skyes (c) in Philadelphia Ledger

Canned!

NEW YORK, July 11.—Completion of sale to W. R. Davis & Co. of New York of $10,000,000 worth of Mexican petroleum last week brought expropriation to another stage. Negotiations were concluded in Mexico City July 6 by W. F. Flanley, Davis representative. Announcement of the sale brought a new storm of protest from the ousted companies who said the Davis firm, despite its fleet of tankers and its outlets to Germany and the Scandinavian countries, had "bitten off more than it can chew." They said attachment proceedings would be started against any ship carrying expropriated oil. The Davis company has been active in handling Mexican oil for the past few months, but had confined its dealing to oil produced from wells owned by the government before expropriation.

Mr. Flanley said the shipments of oil—which must necessarily come from the expropriated United States and British properties since production from the non-expropriated properties is not sufficient to fill more than 20 per cent of the order—will be made in 26 Swedish, German, Norwegian and British tankers under lease for a period of six months. He said the price would be "based on the world market prices," but he understood they would be beneath the world price by at least 5 per cent.

In payment for the $10.000.000 worth of Mexican oil, 60 per cent will be in machinery and products, largely from Germany and the rest from Sweden. It was pointed out by Americans in Mexico City that the machinery and products involved in the barter arrangement with Germany and Sweden would cut United States manufacturers and labor out of almost $6,000,000 worth of business with Mexico since the goods involved were formerly supplied largely by this country.

Before the University of Virginia Institute of Public Affairs at Charlottesville the expropriation was denounced by Maj. T. R. Armstrong of New York, representing Standard Oil Co. of New Jersey, as "outright confiscation," and defended by Dr. Alejandro Carrillo, on behalf of the Society of Mexican Workers, as "essential to the maintenance of Mexican sovereignty."

The statement that far more is involved in the current issue than the oil properties in Mexico was made by Major Armstrong and Joseph C. Rovensky, vice president of Chase National Bank of New York, and not denied by Doctor Carrillo.

"If Mexico can get away with its present arbitrary act, there is no safety for American property anywhere in Latin America or elsewhere, and sooner or later in some part of the world drastic action will be called for," Major Armstrong declared. "Such a contingency should not be invited by tolerance of the present illegality. There are estimated to be five billion dollars of American investments in Latin America and a probably greater amount in the non-American foreign investments."

Major Armstrong called attention to the left-wing celebrations in Cuba reported to have included promises that Cuba will follow the Mexican example in expropriating foreign utilities, sugar mills and other enterprises. The plea of President Cardenas in a radio speech urging Latin-American countries to "follow the splendid example set by Mexico in ridding itself of foreign industrial control" was pointed out by Major Armstrong as an example of the threat contained in the Mexican expropriation.

"We venture to submit," said Major Armstrong, "that this growing ebullience in praise of confiscation should be stopped at the earliest possible moment before it becomes an avalanche endowed with the appearance of righteousness."

That confusion and loss to all concerned had resulted from the expropriation was asserted by Major Armstrong and Mr. Rovensky, and admitted by Doctor Carrillo. The latter, however, protested that, while temporary confusion was inevitable, the Mexican people would profit ultimately by "assertion of their constitutional rights."

"The Mexican workers, in whose interests the expropriation was ostensibly carried out, have not benefited from the change," Mr. Rovensky said. "On the contrary, wages have been lowered, economic and social benefits have been curtailed, employment has declined sharply. Surely the future development of a country is not enhanced by frightening new capital away from it. For Mexico and her people, whom I know and admire, I hope for a mutually satisfactory solution of the present problem. I cannot believe this is impossible."

No such "mutually satisfactory solution" was indicated, however, by Doctor Carrillo's remarks and no concrete counter-proposals were advanced by him. He said his people were not "thieves," and that they would pay the companies for the oil expropriated, but how, when or in what manner he was not prepared to say. Reports from Mexico to the contrary notwithstanding, Doctor Carrillo declared his country had not and would not sell her oil to "Fascist, aggressor nations. But the very moment the Mexican Government makes a deal with an American independent," he said, "the press, friendly to oil trusts, cries out: 'Mexico is indirectly selling oil to Germany,' and when we ask our Latin American sister republics to purchase some of our petroleum, they immediately raise the cry, 'Mexico is advising Latin America to expropriate all foreign property, but especially American property'."

The oil companies, Doctor Carrillo said, wanted to "drag into the fight the governments of the United States and Great Britain. But," he went on, "fortunately Mr. Roosevelt is not only a good neighbor, but a man who knows much better than we do how the large monopolies behave even in powerful countries such as this great American democracy."

Seibel in Richmond Times-Dispatch

Strain on the "Good Neighbor" policy

W. R. DAVIS—NEGOTIATOR

William Rhodes Davis is listed as residing at the Savoy Plaza, New York, with offices at 30 Rockefeller Plaza. Press reports have stated that he came to the Mid-Continent from Alabama, being associated about 1925 with the Malcona Oil Co. and Fleetborn Oil Co. of Ada, Okla. He is interested in the Texas Crusader Oil Co. He is a director of Crusader Petroleum Industries, registered in London in 1935 to acquire from H. W. Wilson the assets of Foreign Oil Co. of Boston in the British Isles and Europe comprising the issued capital of Europaische Tanklager und Transport A.G. and a Swedish company, Svenska-Foil A/B. The directors are N. V. Hansell, Dr. C. Hartung, C. F. von Clemm and E. Boeckelman. It has a refinery with a capacity of 7,500 bbls. daily at Finkenwarder, Hamburg, Germany.

Davis and Wilson are also directors of Federated Petroleum Securities, Ltd., registered in England in 1936, formerly Davis Petroleum & Engineering Co., Ltd. Davis is also a director in Parent Petroleum Interests, Ltd., of which T. C. J. Burgess and Lord Inverforth are also directors. This investment company owns crude and refinery interests in Mexico, the United States and elsewhere. It has a large interest in London and Thames Haven Oil Wharves, Ltd., of which Burgess, Lord Inverforth and the Earl of Coventry are directors. It has a storage capacity of 1,100,000 tons, two petrol refineries and one crude refinery and is technical adviser to Irish National Refineries, Ltd., which holds a concession from the Irish government. Nils V. Hansell, Burgess, Lord Inverforth and Lord Glenavy are directors of the Irish company. Davis' operations in the United States have been accompanied by considerable litigation.

Power Commission Orders Issued on Gas Law

WASHINGTON, D. C., July 11.—The Federal Power Commission has lost no time in putting into effect the provisions of the new federal natural gas act, and the first result will be an enormous amount of paper work required of companies transporting natural gas in interstate commerce.

The commission issued three orders, the first a questionnaire which amounts to a general investigation of the entire gas industry, and the others requiring the filing of schedules, contracts and reports from all companies. No new division will be set up, but gas regulation work will be handled along with electric power regulation through the commission's legal, engineering and finance divisions.

"In assuming these new and important duties," said Acting Chairman Clyde L. Seavey, "the commission pledges to all concerned the same fair and vigorous enforcement that has characterized its regulation of electric utilities under the Federal Power Act." He also declared that "federal regulation may well be expected to exercise a decided influence over rates and services in general and to have a wholesome effect upon the natural gas industry."

The questionnaire, being sent to all concerns within the scope of the act, is designed to give the commission a detailed picture of the industry. While expressly to aid the commission in determining what persons are natural gas companies engaged in interstate commerce, the returns will give it many facts on conditions and practices and will constitute a general investigation which will show the nature of probable future regulation.

Provisional rules and regulations, subject to revision, have also been issued, effective today, describing procedure for filing petitions and complaints, holding hearings, and obtaining permits for construction and abandonment of facilities and for imports and exports of natural gas.

It requires every natural gas company to file its rate schedules with the commission, giving 30 days' notice in the case of changes and 10 days' notice in the case of new charges or schedules. In filing a rate change, the company is required to explain its reasons and to estimate the sales and revenue for the new rates for a year in advance. The form and style of rate changes is also prescribed. Procedure is established for protests against scheduled rates and for the suspension of rates schedules by the commission.

The uniform system of public utility accounting will be required of gas companies, and the order places on the companies the burden of proof in justifying every accounting entry. An important provision requires gas companies to report by January 20 the amount of natural gas transported and sold during each of the last six months of 1938, together with the consideration received from each sale.

The third order is of a temporary nature, setting dates for filing rate schedules already in effect. The date is August 22 for the Pacific and Rocky Mountain states, and including Texas, Oklahoma, and North and South Dakota; August 29 for Alabama, Arkansas, Illinois, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, Tennessee, and Wisconsin; and September 6 for all states east of the second group. In addition to the rate schedules, the companies must file classifications, regulations and practices affecting the charges, all sales contracts, written or oral, samples of bills rendered, and a report on the gas sold or transported at each rate during each month of the past year.

Monopoly Investigation

"No witch burning" is the promise of every member of the new national economic committee—the monopoly probers—on every occasion, meaning it is not the present intention of this group to track down specific antitrust violations by individual business men. But in spite of this the committee is very obviously going after what it considers a very definite type of economic witchcraft—the rigidities in industrial prices.

New Deal economists have been persistent in their attacks on the relative inflexibility of the prices of industrial commodities. They blamed it for the depression of 1929-32 and they are blaming it for the present recession. They feel that in some way, or in various ways, business executives are responsible for this condition.

President Roosevelt voiced their views last fall when he declared that private monopolists had priced themselves out of a market. The object of the monopoly probe is to discover just what sort of witchcraft business uses to keep up prices when demand falls and to raise them when increased consumption is anticipated. Charms against this witchcraft will then be fabricated in the form of new laws.

Although the committee is composed half of members of congress, some of them decidedly on the conservative side, the administration insiders have already manipulated themselves into positions to direct the course of the inquiry. Each congressional member is going to pair off with one executive appointee, and since the representatives and senators have other things to tend to, the real work will be done by the New Dealers. Even more significant is the appointment of an executive secretary in the person of Leon Henderson, economic adviser to the Works Progress Administration, who will have authority to hire investigators, coordinate the separate investigations of the six cooperating agencies, shape preliminary reports, and generally influence the trend of the probe. Mr. Henderson is currently one of the President's closest advisers on matters pertaining to business. It was he who predicted the business recession of last fall more than a year ago, and he is generally credited with having convinced the President last fall that business men were to blame for the slump.

Mr. Henderson's economic views run in close parallel to those of Thurman Arnold, Herman Oliphant, Jerome Frank, and other administration insiders who will direct or influence the monopoly study. All of them feel that depressions are caused by prices running ahead of, or failing to drop to the level of, purchasing power. They want to break up the system or systems by which this is made possible, and they feel that in general the remedy is to require more competition among business units.

STATE CAPITALS

OKLAHOMA

TRIANGULAR WELL SPACING in the new Bugher pool, opened by W. A. Delaney and others near Noble, Cleveland County, has been proposed to the Oklahoma Corporation Commission by Mr. Delaney, who suggested a 20-acre spacing rule for the pool. Mr. Delaney recommended that units be divided to form two 20-acre triangles, and that the wells be spotted in the center of each, causing a staggering of locations. Delaney and his associates claim that 84 per cent of the lessees controlling 98 per cent of the acreage favor the plan.

A SERIES OF SUITS have been filed attacking proration in the Wilcox sand zone in Oklahoma City. The validity of the state's conservation law is not questioned. It is the enforcement of the provisions of the statutes through orders of the commission to which objections have been made. The suits are based on orders fixing minimum, flat and marginal allowables in the Wilcox zone. Natural Gas Development Co., H. I. Grimes, the Grimes-Abilene Oil Co. and the Grison Oil Corp. are plaintiffs in separate cases. A number of oil companies have joined the corporation commission in opposing the claims of the plaintiff operators.

PIPE LINE PRORATION was made effective in the Healdton field in Carter County by Pure Oil Co., which announced on July 9 that it would cut its crude runs in Healdton to 40 per cent of its allowable for the months of January to June, inclusive. The company had been taking about 3,200 bbls. of Healdton crude per day, of which about one-fourth was its own production. The company said it would prorate its own leases along with those from which it buys oil. Loss of market is given as the reason for the cut in runs. The Pure Transportation Co. is the crude buyer for the company. Pure was one of the first buyers of oil in Healdton, having entered the field in 1914. It operated a refinery in Ardmore, Carter County, until 1933, since which time it has shipped Healdton oil to its Muskogee plant.

TEXAS

MONTHLY HEARING of the Railroad Commission of Texas to establish allowables for August will be held on July 18 in Austin. The big issue will be the continuance or noncontinuance of the Sunday shutdown movement. The commission has asked for six months' purchase nominations, or to the end of January 1939.

TEXAS CRUDE OIL PRODUCTION for May 1938 was 37,471,175 bbls., as reported to the railroad commission, Chairman C. V. Terrell announced. This is the largest reduction in production reported so far in 1938, being 15 per cent less than the same month of 1937, as disclosed by the following comparison:

	Indicated production— 1937	1938
January	39,062,768	40,369,545
February	37,295,155	35,086,592
March	43,438,739	40,809,385
April	41,211,622	40,246,154
May	44,185,400	37,471,175
Total five months	205,193,684	193,607,600

The U. S. Bureau of Mines estimated May 1938 demand of Texas crude as 1,322,500 bbls. daily. Texas produced 1,208,748 bbls. daily or 113,752 bbls., or 9 per cent less than the bureau's estimate of demand.

Texas producing wells continued to reflect a substantial increase as operators reported 32,657 wells flowing and 48,575 pumping, or a total of 81,232 wells producing in May 1938. In May 1937 71,923 wells were reported, or an increase of 9,309 wells in 1938 over 1937.

THE FEDERAL COURT IN THE DISTRICT OF COLUMBIA has upheld the power of Secretary Ickes to issue orders preventing former employes from practicing before the Interior Department for two years, denying an injunction sought by John D. Glass, former chief investigator for the Federal Petroleum Administration. Glass resigned in September, 1937, to practice at Tyler, Tex., before Federal Tender Board No. 1, but was barred by Ickes' order. Glass contended he had not been told of the order before resigning and it had not been applied to others.

IN A BRIEF FILED JULY 11, at Austin, the Lone Star Gas Co. contended that the Austin Court of Civil Appeals has no choice under a ruling of the United States Supreme Court other than to affirm a district court verdict invalidating a railroad commission order reducing by 20 per cent the company's gate rate in more than 275 cities in Texas.

The appeals court held the reduction to be just and reasonable and valid in every particular, thus reversing the district court. The Lone Star Gas Co.'s 77-page brief set forth that the Supreme Court of the United States condemned the evidence as insufficient.

KANSAS

A 10-ACRE SPACING RULE in the Geneseo pool, Rice County, asked for by the Continental Oil Co., was scheduled for discussion before the Corporation Commission on July 14. The application was filed after K. C. Bates of Wichita leased a 1.15-acre plot on the southeast edge of the pool. A well on this small tract would require four direct offsets, applicant sets forth. The commission recently set a precedent when it issued a 10-acre spacing rule in the Zenith pool in Stafford County.

CHARGES OF GAS WASTAGE in the Hugoton field in southwestern Kansas having been made to the Corporation Commission, a hearing will be started by the commission at Hugoton on July 27. The inquiry was asked for by Joe Denham and L. F. Myers of Dodge City. The Hugoton gas field is one of the largest gas reserves in the world. It covers parts of six counties, or more than 1,380,000 acres. Recoverable reserves are estimated at 14,250,000,000,000 (fourteen trillion. two hundred fifty billion) feet.

CALIFORNIA

CRUDE OIL ALLOCATION in California for the month of July has been officially set at 617,375 bbls. per day, with 2,615 bbls. unassigned to partially take care of new production expected to be added during the month. The sum of these two figures represents the state's allowable of 620,000 bbls. per day officially set by the Central Committee of California Oil Producers. Under the new set-up the northern division comprising all San Joaquin Basin fields is given a daily allotment of 256,997 bbls. and the Coastal area is given an allotment of 79,440 bbls. per day. Southern Division, consisting of all Los Angeles Basin fields has been allotted 280,938 bbls. per day. Umpire J. R. Pemberton and the allocation committee found it necessary to absorb 28,733 bbls. of new production which resulted from the completion and recompletion of 123 wells in various fields in June. Of this new production the committee allocated 15,906 bbls. which was spread out over the state and cut from wells already producing. Very little change was made in the allotments that prevailed during June, some fields being up a little and others down slightly. Rio Bravo, where 10 wells have been completed, is given an allotment of 3,090 bbls. per day for July as compared with 2,265 bbls. in June. West Montebello where operators are developing a fifth and sixth productive zone discovered by St. Helens Petroleum Co., is allotted 2,050 bbls. per day in July as compared with 1,812 bbls. per day during June. Dominguez field's allotment for July is up 200 bbls. per day, to 22,150 bbls.

LOUISIANA

AN ACT TO ESTABLISH AN UNPAID COMMISSION to be known as the Louisiana Commission on Interstate Cooperation "to facilitate the cooperation of this state with other units of government; defining and fixing its rights, powers and duties," passed both houses of the Louisiana legislature and was signed by Governor Leche. It makes no specific mention of oil operations, and its reference to the committee on railroads and insurance would give one the idea it dealt mainly with those phases.

THE STATE LEGISLATURE, which adjourned last week, failed to pass a number of bills that were on the calendar. Among those killed in the house was the Senate Bill No. 106, (Lindsey and Peltier) to continue the mineral code proposal to 1940. It passed the senate and met with favorable report from the house committee. The Swoeney bill regulating transportation of Louisiana-produced gas was withdrawn; Gilbert bill to regulate oil production and pipe line operations, passed the senate, but died in the house; Swoeney bill to provide methods of checking and measuring oil produced in Louisiana, withdrawn; to amend laws governing transportation of gasoline, died in committee; to levy additional half-cent gasoline tax for farm roads, died in committee; to prorate the market for natural gas, withdrawn.

TITLE TO MINERAL DEPOSITS along the edge of the Gulf of Mexico has been taken by the State of Louisiana through enactment of an act of the state legislature which has been signed by Governor Leche. The law extends Louisiana territorial waters to 27 miles out from shore, instead of to the 3-mile limit. The known existence of oil beneath the surface of the Gulf close to shore, and the belief that attainable oil sands may be reached farther out, led to the passage of the act.

Strong Export Situation Is Shown by Bureau

The daily average production of crude petroleum in May was 3,183,000 bbls., the lowest since January, 1937, according to the Bureau of Mines. The decrease of 240,000 bbls. below the average of the preceding month was the result of lower state allowables and of efforts to reduce crude inventories.

Production in Texas declined by 134,000 bbls. daily, while Oklahoma showed a decrease of 41,000 bbls., California of 33,000 bbls., Kansas of 17,000 bbls., Arkansas of 11,000 bbls., and New Mexico of 4,000 bbls. Only minor changes occurred in other states.

Reduced production resulted in a sharp decline of 8,100,000 bbls. in stocks of refinable domestic crude. Exports of 7,800,000 bbls. of crude petroleum set a new record and were greater than anticipated. Daily average crude runs to stills in May were 3,261,000 bbls., an increase of 12,000 bbls. as compared to the previous month.

The relatively small decrease in gasoline stocks and a further large increase in fuel oil stocks indicate that runs were higher than necessary.

The yield of gasoline from crude was 44.2 per cent for May compared with 43.6 for April. The indicated domestic demand for motor fuel was 44,911,000 bbls., a decrease of about 600,000 bbls. compared with May, 1937. However, exports of motor fuel were 4,576,000 bbls., an increase of about 1,300,000 over last year, so that total demand showed an increase of about 1½ per cent. The decrease of 1,912,000 bbls. in the stocks of finished and unfinished gasoline reduced the total of these stocks to 88,147,000 at the end of May. This decrease was greater than last year but represented slow progress in the liquidation of excessive inventories.

United States Supply and Demand—Crude Oil (Bbls.)

First Five Months, 1938 and 1937

FIVE MONTHS—	TOTAL SUPPLY	TOTAL DEMAND	EXCESS DEMAND	EXCESS PCT.	DOMESTIC PRODUCTION	IMPORTS	INDICATED DOMESTIC DEMAND‡	EXPORTS	STOCKS REFINABLE CRUDE MAY 31
1938	519,024,000	526,125,000	7,101,000	1.4	508,569,000	10,455,000	493,372,000	32,753,000	‖298,983,000
Daily average	3,437,000	3,484,000	47,000	....	3,898,000	69,000	3,266,000	217,000	.....
1937	523,396,000	513,766,000	*9,630,000	*1.8	514,354,000	9,042,000	491,502,000	22,264,000	308,209,000
Daily average	3,466,000	3,401,000	64,000	...	3,403,000	60,000	3,255,000	147,000	.....
Increase, 1938	†4,372,000	12,359,000	.....	...	†5,785,000	1,413,000	1,870,000	10,489,000	†9,226,000
	†0.8%	2.4%	.....	....	†1.1%	15.6%	0.4%	47.1%	†3.1%

Supply and Demand—Refinery Products—Motor Fuels (Bbls.)

FIVE MONTHS—	TOTAL SUPPLY	TOTAL DEMAND	EXCESS DEMAND	EXCESS PCT.	DOMESTIC PRODUCTION	IMPORTS	DOMESTIC DEMAND	EXPORTS	STOCKS MAY 31§
1938	228,979,000	216,094,000	*12,885,000	*5.6	228,979,000	.....	196,461,000	19,633,000	87,535,000
Daily average	1,516,000	1,431,000	.....	....	1,516,000	.....	1,301,000	130,000	.....
1937	227,254,000	209,625,000	*17,629,000	*7.7	227,254,000	.....	195,461,000	14,164,000	78,258,000
Daily average	1,505,000	13,885,000	.....	...	1,505,000	.....	1,294,000	93,000	.....
Increase, 1938	1,725,000	6,469,000	.....	....	1,725,000	.....	1,000,000	5,469,000	9,277,000
	0.8%	3.1%	.....	...	0.8%	.....	0.5%	38.6%	11.9%
Kerosene									
1938	27,697,000	27,153,000	*544,000	1.9	27,697,000	.....	23,497,000	3,656,000	7,627,000
1937	26,226,000	26,283,000	57,000	...	26,226,000	.....	22,924,000	3,359,000	5,576,000
Increase, 1938	1,471,000	870,000	.....	....	1,471,000	.....	573,000	297,000	2,051,000
	5.6%	3.3%	.....	....	5.6%	.....	2.5%	8.7%	36.8%
Gas Oil and Residual Fuel Oil¶									
1938	195,267,000	187,913,000	*7,354,000	*3.7	186,674,000	8,593,000	169,523,000	18,390,000	116,138,000
1937	190,625,000	207,498,000	16,873,000	8.8	180,181,000	10,444,000	190,414,000	17,084,000	97,609,000
Increase, 1938	4,642,000	†19,585,000	.....	...	6,493,000	†1,851,000	†20,891,000	1,306,000	18,529,000
	2.4%	†10.4%	.....	....	3.6%	†21.5%	†12.3%	7.6%	19.0%
Gas Oil and Distillate Fuels									
1938	62,051,000	61,692,000	*359,000	*0.5	62,051,000	.....	49,630,000	12,062,000	22,385,000
1937	57,842,000	65,110,000	7,268,000	12.5	57,362,000	480,000	51,205,000	10,905,000	18,451,000
Increase, 1938	4,209,000	†418,000	.....	....	4,689,000	†480,000	†1,575,000	1,157,000	3,934,000
	7.3%	†0.6%	.....	....	8.2%	.....	†3.2%	6.8%	21.3%
Residual Fuel Oils									
1938	133,216,000	126,221,000	*6,995,000	*0.6	124,623,000	8,593,000	119,893,000	6,328,000	93,753,000
1937	132,783,000	145,388,000	12,605,000	9.5	122,819,000	9,964,000	139,209,000	6,179,000	79,158,000
Increase, 1938	433,000	†19,167,000	.....	....	1,804,000	†1,371,000	†19,316,000	149,000	14,595,000
	0.3%	†15.2%	.....	...	1.4%	†15.9%	†16.1%	2.4%	18.0%
Lubricating Oils									
1938	13,075,000	12,334,000	*741,000	*6.0	13,075,000	.....	8,298,000	4,036,000	8,255,000
1937	14,429,000	14,434,000	5,000	....	14,429,000	.....	9,961,000	4,473,000	6,478,000
Increase, 1938	†1,354,000	†2,100,000	.....	....	†1,354,000	.....	†1,663,000	†437,000	1,777,000
	†10.3%	†17.0%	.....	....	†10.3%	.....	†20.0%	†10.8%	27.4%
Petroleum Wax (Lbs.)									
1938	198,936,000	203,102,000	4,166,000	2.1	183,400,000	15,536,000	134,644,000	68,458,000	140,826,000
1937	227,191,000	234,211,000	7,020,000	3.1	216,160,000	11,031,000	125,418,000	108,793,000	103,614,000
Increase, 1938	†28,255,000	†31,109,000	.....	....	†32,760,000	4,505,000	9,226,000	†40,335,000	37,212,000
	†14.2%	†15.3%	.....	....	†17.8%	40.8%	7.3%	†58.9%	36.0%

*Excess supply. †Decrease. ‡Crude oil only. §Includes finished and unfinished refinery gasoline and natural gasolines. ¶Gas oil and fuel oil equals gas oil and distillate fuels plus residual fuel oils. Note: Total supply equals domestic production plus imports. Total demand equals domestic demand plus exports. Data on demand for refined products are based on refinery shipments. ‖Does not include 17,353,000 bbls. of heavy oil in California. Comparable figure for May 31, 1937, not available.

Crude Oil Runs to Stills and Total All Oils (Bbls.)

FIVE MONTHS—	TOTAL IMPORTS§	TOTAL EXPORTS§	TOTAL CRUDE TO STILLS	PER CENT YIELD GASOLINE‡	NATURAL GASOLINE PRODUCTION	TOTAL SUPPLY ALL OILS*	TOTAL DEMAND ALL OILS*	STOCKS ALL OILS MAY 31*
1938	20,882,000	79,658,000	476,877,000	46.7	20,918,000	551,036,000	524,553,000	590,469,000
Daily average	138,000	528,000	3,158,000	...	138,000	3,649,000	3,474,000	.....
1937	21,874,000	62,116,000	467,588,000	47.1	19,104,000	556,556,000	526,507,000	548,695,000
Daily average	145,000	411,000	3,096,000	...	126,000	3,686,000	3,487,000	.....
Increase, 1938	†992,000	17,542,000	9,289,000	...	1,814,000	†5,520,000	†1,954,000	41,774,000
	†4.7%	28.2%	1.9%	...	9.5%	†1.0%	†0.3%	7.6%

*Total all oils includes crude and refined products, natural gasoline and benzol. Stocks on April 30, 1938, represented 171 days' supply which compared to 156 days on same date in 1937. †Decrease. ‡Includes natural gasoline blended at refineries. §Includes crude oil and refinery products. In case of imports includes receipts in bond and for domestic use. All data based on Bureau of Mines reports.

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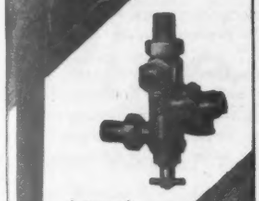
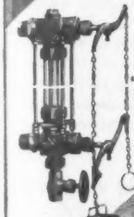
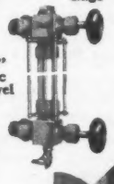
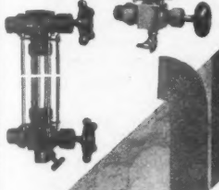

Automatic Injector

Ejector, Syphon or Jet Pump


"Navy Type" Liquid Level Gage


"Safeguard" Automatic Liquid Level Gage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● "It is the most simple gage to service that I have ever seen." This statement is typical of the remarks made throughout the oil fields since the Penberthy Reflex Gage was introduced.

Note particularly the U-Bolt type of construction that is the strongest and the simplest to service. To replace a glass, simply remove the nuts on the face of the gage . . . it is unnecessary to work between the gage and the boiler.

The Penberthy Reflex Gage shown here is available in both Navy Bronze and Malleable Iron; it is recommended for working pressures to 350 lbs. at 450° F. Gage is furnished complete with Penberthy "Dripless" Drain Cock shown.

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Natural Gas News

Oklahoma City and Tulsa Rate Investigations Started

An investigation of gas rates charged at Oklahoma City by Oklahoma Natural Gas Co. has been ordered by the Corporation Commission, Chairman Reford Bond announced. A petition asking the investigation was signed by 47 citizens. Basic rate now is 45 cents a thousand feet. Commision attorneys and rate experts were ordered to make a study and appraisal and report their findings to the commission.

The city commission of Tulsa has also asked an inquiry into Tulsa rates. Joseph Bowes, president of Oklahoma Natural Gas Co., said: "For a company this size, we have the lowest gas rates in the United States." The company has had a uniform rate in all cities throughout the state. But if the big cities get reductions, then rates in the other towns will have to go up.

Prizes Offered to Students In Home Study Courses

To the student completing the home study course on American Gas Practice offered by Columbia University and to the student completing the home study course on Natural Gas offered by the University of Kansas during the year from September 1, 1938, to September 1, 1939, and attaining the most comprehension of the subject prizes of $50 are being offered by the A.G.A. Committee on Personnel Practices of which Paul W. Herring of Peoples Gas Light & Coke Co. of Chicago is chairman. Both courses are sponsored by the American Gas Association and are supervised by advisory committees of gas engineers appointed by the association.

The course on American Gas Practice is divided into the production of manufactured gas and the distribution and utilization of gas. The course on Natural Gas covers the entire field of natural gas, from origin to utilization.

Refinery Projects

Erecting Small Skimming Plant in New Mexico

FORT WORTH, Tex.—Errol C. Holt and Mack Hall of Dallas are now constructing a 2,000-bbl. daily capacity skimming plant in Eddy County, New Mexico, near the Artesia oil field. The plant will take its crude supply from the Artesia, Maljamar and other small nearby pools.

Site Selected for Producers Refinery at Shelby, Mont.

SHELBY, Mont.—Definite location for the Producers Refining Co.'s new plant has been selected at Shelby, it was announced by J. W. Johnson, of that company. The refinery will be operated on Cut Bank and Kevin-Sunburst crude. Ground for the refinery site has been purchased west of the city of Shelby and is being surveyed preparatory to starting actual construction work. Preliminary engineering work is being done and actual construction is expected to be contracted for at an early date.

The plant will have a rated capacity of 3,000 bbls. daily, it has been stated, and around 2,000 bbls. per day in production from the two major producing fields of northern Montana have already been pledged. Estimated cost of the project is in the neighborhood of $650,000.

Transportation Costs Cause Changes at Casper Plant

DENVER, Colo., July 11.—Standard Oil Co. of Indiana notified its employes at its Casper refinery the past week that beginning September 1 light oil operations at the plant will be reduced to 50 per cent of capacity and the manufacture of Iso-Vis motor oils and greases will be discontinued.

In its statement the management said the Casper refinery for some time has been operating at approximately 85 per cent of capacity. To maintain this schedule, it has been necessary to ship products of the Casper refinery into territory which could more economically be served from other refineries. "The competitive situation which we face makes it imperative that such action be no longer delayed."

The company is making liberal plans for taking care of the personnel affected. Employes 60 years of age or over on September 1 who have had 15 years of continuous service will be recommended for annuities. Those who do not receive annuities will be recompensed according to age and service. Men under 45 and women under 35 will be given one week's earnings for each year of service plus two weeks' earnings. Those over these ages will receive two weeks' earnings for each year of service plus two weeks' earnings.

The latest figures available gave the refinery a charging capacity of 12,600 bbls. daily with 6,650 bbls. cracking capacity. At one time the capacity was 50,000 bbls. daily and on occasions runs were made up to 60,000 bbls. The investment at its height was placed at around $25,000,000. Much of the old equipment has been dismantled.

The old Continental Oil Co., then strictly a marketing unit, was one of the largest customers for the Casper refinery. The plant for several years also had an extensive export business and shipments of gasoline averaged around 100,000,000 gallons a year, solid train loads being dispatched to Baton Rouge, La., for shipment to Europe.

Standard early in 1930 began retail marketing in the Rocky Mountain area under its own brand names. In 1929 it made a contract with Mountain Producers Corp. and Salt Creek Producers Association for its oil in storage at the Midwest tank farm. Last year the last of this oil, amounting to around 11,000,000 bbls., was run and the contract was completed. As the storage oil was run it was replaced with new crude and the storage remains approximately the same.

Standard also came into full ownership of around 11,000,000 bbls. of storage at the Clayton tank farm through purchase of the remaining 50 per cent interest and for more than a year this crude has been running to the refinery at Chicago. Just how much has been moved is not reported, but that it is in excess of 4,000,000 bbls. is considered reliable.

With the construction of plants near the seaboard to take care of its exports, foreign shipments from Casper ceased. Continental then built its refinery at Denver. In the meantime, Texas Co. and White Eagle (Socony-Vacuum) had built refineries at Casper and Standard has another refinery at Greybull. Standard, through the acquisition of Midwest, also acquired Utah Oil Refining Co. at Salt Lake City. The Greybull refinery is just south of the Montana boundary, but Montana has a persistent campaign for use of Montana products from Montana crude and only 30 per cent of total sales in that state are of imported gasoline. On the south Standard has a plant at Cheyenne operated by Bay Petroleum Co., and between Casper and Cheyenne, Continental has a refinery at Glenrock.

Before Continental built its plant at Denver, Standard was said to have had plans for a refinery there, but shifted to Laramie. This plant since has been dismantled. Should the company decide to build a plant at Denver it would have to construct only 165 miles of pipe line to tap its trunk line to Missouri.

WATER FLOOD AREA

(Continued from Page 20)

vania, where production has been steadily climbing since 1923 and has increased 100 per cent since 1929 (Figure 1). In 1929 the Bradford field accounted for approximately 35 per cent of the Pennsylvania Grade crude production and last year had increased this to 56 per cent.

Necessity for curtailment is evident from the increasing stocks and the effect of these stocks on prices. Stocks have increased 1,028,236 bbls., over 23 per cent, since last May, while prices (Bradford field) have dropped $1.02 per barrel or 35 per cent (Figure 2).

The effect on the refining division has been very severe as is evident from the declines in prices ranging from 54.5 per cent on 200 viscosity neutral to 50 per cent on 600 steam refined stock (Figure 3). However, a similar curtailment in operations has been noted here also. Runs to stills in the first 25 days of June averaged an estimated 69,500 bbls. per day against 71,500 bbls. in May, 76,500 bbls. during the first five months of the year and 80,332 bbls. in 1937. Bureau of Mines reports show runs have been dropping almost regularly since last October.

Since the Pennsylvania industry is essentially a lubricating oil producing industry, it has been particularly hard hit by the business depression which had its inception last summer. Bureau of Mines reports show a decrease of 16 per cent in the domestic demand for lubricants in the first four months of 1938 against the like period of 1937. At the same time these reports show a large increase in stocks of lubricating oils and a steadily declining demand during the past 12 months (Figure 4.) These data show that the lubricating oil division of the domestic oil industry has suffered severely and explain why the Pennsylvania industry, entirely dependent on lubricants, has been so seriously affected.

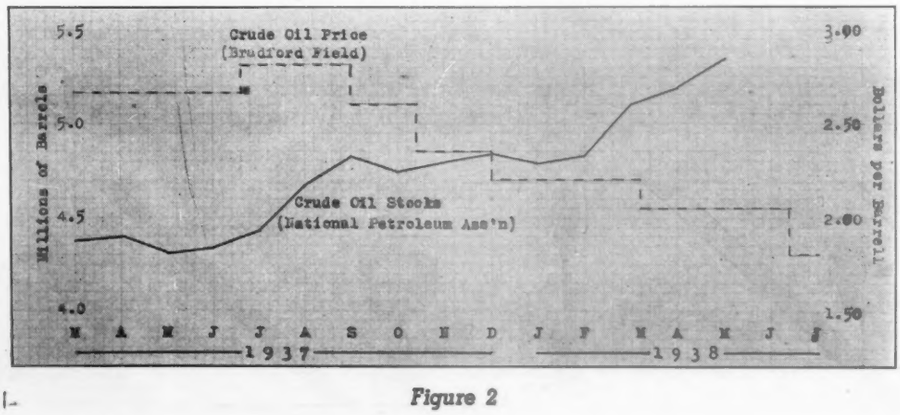


Figure 2

Pipe Line Activity

Kansas Industrial Gas Co. Line Again Reported

A news dispatch from Emporia, Kans., quotes F. S. Ruggles, Emporia engineer, as saying construction of a natural gas pipe line which would connect the Hugoton field in southwestern Kansas with eastern and southeastern Kansas counties would be started soon. He said part of the area will be served before November.

The line will be used solely for commercial and industrial purposes. Builders planned to extend it to Kansas City, Kans., with a spur to Iola, Humbolt and Chanute.

Lloyd D. Burton of Chanute, a promoter of the line, said the new company would be incorporated as the Kansas Industrial Gas Co. Contract for the construction, which, it was said, will cost $5,000,000, was reported to be let to Truman & Smith of Eldorado.

Standard to Lay Extension To Their Arkansas Pools

Standard Oil Co. of Louisiana has announced intention of laying an oil line from its trunk system in South Arkansas to three new fields in the area, provided development of their reserves within the near future meets expectations. The new line will serve the Buckner field of northwestern Columbia County, the Magnolia field, near the town of the same name, and the Village field, a short distance east of the former field.

Some work on right of way has been begun, but actual laying of the line will depend upon the success of tests drilling in the Village and Magnolia fields. Standard Oil Co. owns all five producers in the Buckner field, the sole Village producer, and has leases in all three areas. The Magnolia field discovery well, drilled by the Kerr-Lynn Oil Co. has been sold, together with considerable acreage to Atlantic Refining Co., which, with other operators is beginning development of the new pool.

Concurrent with its announcement of the proposed line, Standard Oil Co. posted prices for crude of the three fields on a gravity basis, which runs 7 cents lower than that for other South Arkansas and North Louisiana crudes.

The Magnolia Petroleum Co. has announced the laying of a 2-mile extension to its Cotton Valley gathering system to include the recently completed southeast outpost well, Stanolind Oil & Gas Co. No. 1 Pardee, which brought in Cotton Valley's first Bodcaw crude production. The well has been shut in for nearly a month awaiting an outlet.

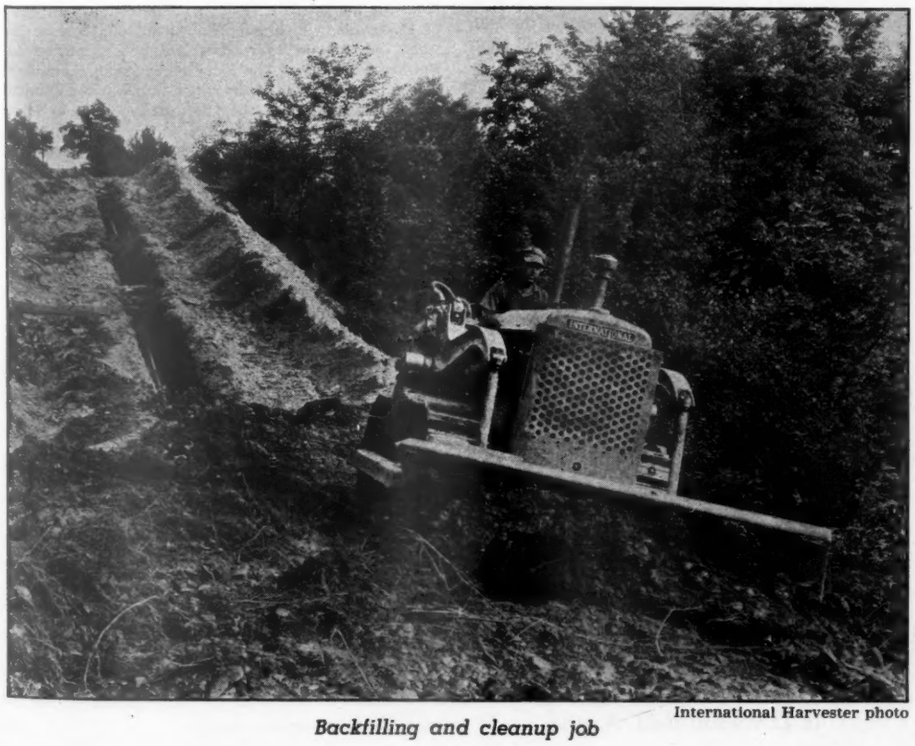
Line From Robbins Station to Wellington Pool, Kansas

Derby Oil Co. has let a contract to Pipe Line Service Co. of Seminole for a 4-inch line from its Robbins pool pump station, south of Wichita, Kans., to the Wellington pool of Sumner County, a distance of 20 miles. Derby recently negotiated a contract with E. B. Shawver and Transwestern Oil Co. to run oil from their leases in the Wellington area. Until the pipe line is completed the oil is brought to Wichita by tankcar over the Rock Island. Approximately 10 cars daily are being received at Derby's North Wichita refinery.

Natural Gasoline

Warren Installs Recompressor At Aransas Pass, Tex., Plant

HOUSTON, Tex. — Warren Petroleum Corp. has completed installation of a recompressing unit for the utilization of the various gases produced at its Aransas Pass, in Southwest Texas, natural gasoline plant. The unit will operate at a pressure of 300 pounds per square inch and will handle approximately 1,000,000 feet of gas per day. It is expected to increase the daily gasoline output by about 5,000 gallons.



International Harvester photo

Backfilling and cleanup job

RFC Asked for Loan for Gas Line to Mesabi Area

CHICAGO, July 11.—Allen V. Junkin, St. Paul lawyer, disclosed today the Reconstruction Corporation would be asked to lend $20,000,000 to finance reconstruction of a natural gas pipe line from southwestern Kansas to the Mesabi iron range in northern Minnesota. A tentative application has been drawn in the name of the Kansas Pipe Line & Gas Co. of Chicago.

At Washington the RFC declined to confirm or deny the story that a $20,000,000 loan is being sought to finance a natural gas line from Kansas to Minnesota, but John P. Devaney, former chief justice Minnesota Supreme Court, is in Washington as attorney for Kansas Pipe Line & Gas Co. seeking an RFC loan to build a line from Kansas to Duluth. The company's president and principal stockholder is said to be L. E. Fischer, Chicago utilities operator. Northwestern coal interests are vigorously opposing it.

Hughes Gasoline Consumption On His Record Flight

NEW YORK, July 11.—Howard Hughes carried 1,750 gallons of Esso 100-octane gasoline on the takeoff from New York and consumed all but 300 gallons on his 3,610-mile flight to Paris, averaging slightly more than 218 miles per hour. Fuel consumption averaged less than 100 gallons per hour.

The plane carried 50 gallons of Esso aviation motor oil which was introduced in June. The motor oil's viscosity is 120 Saybolt seconds at 210° F.

The motor fuel had an approximate distillation range as follows: Initial boiling point 115°, 50 per cent off at 200°, and endpoint 275°. Other motor oil specifications are withheld by the company, which explains that the oil is still in process of development and subject to change. Hughes added 850 gallons of gasoline to the 300 he had on arrival at Paris for his flight to Moscow.

Hearing on Reclaimed Oils Continued at Pensacola

PENSACOLA, Fla., July 8.—Testimony of one witness, Lieut. C. D. Case, U.S.N.R., professor of mechanical engineering at the Pensacola Naval Air station, today brought the controversy between the Federal Trade Commission and the Gulf Refining Co. over the merits of reclaimed lubricating oils to Pensacola's federal court.

Lieutenant Case, the only witness called before Examiner Miles J. Furnas by Gerard A. Gault, counsel for the commission, during the half hour hearing, testified that lubricating oil had been reclaimed for several years at the naval station. The practice has been discontinued for the present by order of the United States Bureau of Aeronautics, Lieutenant Case said. He testified the bureau had decided to conduct further experiments in the field of reclaimed oil and if further experiments were conducted additional funds for new equipment would be needed.

The bureau decided, the witness stated, that it was more economical to buy new oil, which the navy can purchase at 18 cents a gallon, than reclaimed oil, which costs the station 15.4 cents a gallon.

Lieutenant Case identified a report of the United States experimental station at Annapolis which contained the results of an endurance test comparing reclaimed lubricating oil with so-called virgin lubricating oils.

The Pensacola hearing was the second one held on a complaint by the Federal Trade Commission that Gulf Refining Co. in a circular distributed to its salesmen, distributors and agents December 16, 1936, "unfairly disparaged" reclaimed motor oil. Reclaimed oil, the commission contends, is a legitimate product and the reclamation and sale of motor oils is "a legitimate business engaged in by honest and reputable" firms.

The time and place of the next hearing, which ultimately is expected to result in the taking of testimony from scores of witnesses in all parts of the country, has not been determined.

INTERNATIONAL NEWS

Fifteen-Barrel Oil Showing Found in Well in Scotland

Shooting of the sandy lime section in Anglo-American Oil Co. No. 1 Midlothian, near Dalkeith, Scotland, is to be attempted in an effort to stimulate the oil showing which tested at the rate of about 15 bbls. per day two weeks ago. Of the fluid recovered by swabbing and occasional flow, 80 per cent consisted of 40-degree A.P.I. gravity oil and 20 per cent drilling water which the formation probably absorbed when it was penetrated.

The oil showing was encountered in a dense sandy lime formation from about 1,730 to 1,760 feet. The formation was cored and recovered samples showed oil. The showing came from Mississippian in the lower carboniferous, known locally as the oil shale group. The showing correlates favorably with that in the Darcy well, less than a mile removed from No. 1 Midlothian, which was drilled toward the end of the world war. Anglo-American, British subsidiary of Standard Oil Co. of New Jersey, drilled No. 1 Midlothian to 3,857 feet into upper Devonian. On a drill stem test at 700 feet, 100,000 feet of gas per day resulted. From another sand section at 1,952 to 2,000 feet which was tested through drill stem gas volume of 1,400,000 feet with 740 pounds pressure showed.

On the original test of the oil shale group showing cement plug was set at 1,811 feet. Operators planned to subject the well to additional swabbing tests to determine whether the water originated from the formation before shooting.

Austrian Crude Production Increased Over Last Year

Crude oil production in Austria in May was 4,900 metric tons, against 3,930 tons in May, 1937. Production for the first five months was 21,600 tons, against 13,930 tons for the same 1937 period. Austrian production averages about 7.25 bbls. per ton.

Drilling Operations to Test New Egyptian Oil Field

Additional drilling operations are now under way to more clearly establish the extent and capacities of the new Egyptian oil field known as Ras Gharib. This information, along with details on the discovery producer, was revealed by Sir Robert Waley Cohen, chairman of Anglo-Egyptian Oilfields, Ltd., before the annual meeting. The discovery well was started in December, 1937, and was completed April 12, 1938, at 2,560 feet from production conservatively estimated at 1,000 bbls. per day.

Discovery of the Ras Gharib field is timely from the standpoint of Anglo-Egyptian operations since the Hurghada field is suffering gradual declines in production and efforts to uncover deeper producing horizons and extend the structure had been disappointing to date.

In order to divert Ras Gharib field production into channels of commerce, Anglo-Egyptian is now engaged in erecting about 30,000 bbls. of storage capacity and a submarine line to reach a depth of 26 feet of water where tankers can take on cargo. Plans call for completion of the storage and submarine pipe line construction work by the last of this month. The company plans to deliver at least 7,000 bbls. of oil per week from the new Ras Gharib field to the refinery at Suez.

Between 1921 and 1925, Anglo-Egyptian drilled two failures near the present Ras Gharib productive structure on strength of surface geological indications. One failure was drilled to 1,275 feet and the other to 3,745 feet. Torsion balance is given credit for final discovery of the field for it was by this method that existence of an anticlinal structure five kilometers north of the earlier exploration was indicated. When Egyptian petroleum laws were revised early in 1937, Ras Gharib was the first area sought by Anglo-Egyptian.

Because of the increased production made available to the Suez refinery by developments at Ras Gharib, the Anglo-Egyptian company is currently engaged in increasing capacity of one distillation unit in the plant which should be available by the end of 1938.

New Iran Field May Mean Erection of Another Refinery

First revelation that the Gach Saran field in southern Iran may rival or surpass the more famous Masjid-I-Sulaiman area both in extent and in productivity was made by Lord Cadman, chairman of Anglo-Iranian Oil Co., before the annual meeting of the company. Establishment of production in the Gach Saran field, formerly known as Gach Quaranghuli, took place more than a year ago. Subsequently two additional producers have been completed capable of 30,000 to 35,000 bbls. per day. Additional exploration was reported under way to define extent of the structure, but thickness of the producing limestone formation and character of the wells so far drilled indicates the new field, about 20 miles inland from the Persian Gulf, will prove to be of major size and importance.

In connection with discovery and conservative development of the new field, Anglo-Iranian has conducted surveys of the Persian Gulf coast east of Abadan with the object of establishing another export terminal and a site adaptable to refinery location. A point on the Khor Musa, not far from the port of Bandar Shapur, is looked upon with most favor at present.

Lord Cadman also revealed that another Iran oil field had been discovered adjacent to Haft Kel, known as White Oil Springs, or Naft-I-Safid. The new area was first subjected to exploration from 1913 to 1919, but results were discouraging. In light of new information made available by development of the Haft Kel field and further geological and geophysical study exploration was renewed. During the year of operations reviewed by Lord Cadman two high-pressure gas wells were drilled and were followed by completion of an oil producer. The Naft-I-Safid structure has not been defined, but it is established as separate from the Haft Kel field.

Because the Anglo-Iranian Oil Co. is compelled to reduce its concessionary holdings to 100,000 square miles by the end of this year the geological and geophysical program is receiving major consideration during current months. Lord Cadman indicated, however, that the company has carried on sufficient drilling and other means of investigation to make the matter of selecting the most desirable acreage a matter of routine.

In Zistersdorf field, Austria

Standard to Drill 14 Wells On Pantepec Concession

Standard Oil Co. of Venezuela has exercised its option to continue development of approximately 800,000 acres of concession lands in eastern Venezuela held by Pantepec Oil Co. of Venezuela. The Standard company has advised that it will drill at least 14 additional wells making a total of 20, the company having virtually completed six wells prior to June 29, 1938, and thereby obtained a half interest. The company has until July 14 to extend its optional privileges to drill 34 additional wells for a three-quarter interest.

Production in Argentina Reaches New High Level

Crude oil production in Argentina reached the record high level of about 18,289,200 bbls., which represented an increase of about 5.5 per cent over the output of 17,283,200 bbls. in 1936.

Yacimientos Petroliferos Fiscales (State Oilfields Department) strengthened its predominating position at the expense of private companies and claimed 48.5 per cent of the total production for 1937. The Y.P.F. had about 46 per cent of the 1936 production.

The bulk of the country's output continued to come from the Comodoro Rivadavia fields on the west coast of Patagonia, which supplied 14,992,000 bbls. of the total, an increase over 14,048,618 bbls. reported for the preceding year. The Salta region, where Standard Oil Co. of Argentina is the largest operator, accounted for 2,066,845 bbls. of the 1937 production and Plaza Huincul registered a slight drop in producing 1,101,806 bbls. last year, compared to 1,168,916 bbls. in 1936. The Salta production was up from 1,981,108 bbls. in 1936. The Mendoza field produced 126,189 bbls., compared to 87,544 bbls. in 1936, and the Jujuy field, which is still in early stages of exploration by Yacimientos Petroliferos Fiscales, accounted for 1,758 bbls. of the 1937 total compared to no yield in 1936. The production by fields and companies for the past two years is shown in the following table:

	1936	1937
Comodoro Rivadavia:		
Yacimientos Petroliferos	7,162,715	7,963,889
Astra, Cia. Argentina de Petro.	1,176,599	1,036,389
Ferrocarrilera	1,513,766	1,367,930
Industrial y Commercial	138,214	192,935
Diadema Argentina, S. A.	4,013,910	4,377,181
Solano, Cia Petro	43,414	53,676
Total	14,048,618	14,992,000
Plaza Huincul:		
Yacimientos Petroliferos Fiscales	555,756	540,050
Standard of Argentina	448,037	401,093
Astra, Cia. Argentina de Petro.	21,805	17,275
LaRapublica (Standard)	143,318	143,388
Total	1,168,916	1,101,806
Salta:		
Yacimientos Petroliferos Fiscales	234,228	273,105
Standard of Argentina	1,746,880	1,793,740
Total	1,981,108	2,066,845
Mendoza:		
Yacimientos Petroliferos Fiscales	67,392	96,801
Ris Atuel Ltda.	20,152	29,388
Total	87,544	126,189
Jujuy:		
Yacimientos Petroliferos Fiscales		1,758

ENGINEERING and OPERATING

In This Issue

WELL STUDIES AS A PRACTICAL PRODUCTION PROCEDURE ..... *Page 34*

Well studies made with the aid of a polished rod dynamometer are becoming of increasing importance in the economical pumping of wells, and many companies have established departments solely for studying pumping well problems. The value of this work is two-fold; first, better selection of equipment to meet conditions in each well and second, a better knowledge of the individual well's characteristics. Operation of equipment used in this work is described and the results of typical studies made on troublesome wells are discussed.

GAS-OIL RATIO FLOW CONTROLLER DEVISED FOR GASOLINE PLANT
By Anson W. Dwen ..... *Page 37*

Great strides have been made in the direction of automatic operation of natural gasoline plants and the modern plant, once lined out, requires but little attention. Here is described a gas-oil ratilo flow controller that has been devised to provide automatic control at a very nominal cost. It consists of two diaphragm assembly units, opposing each other and actuating a bleed from an orifice to control a motor valve.

PROGRESS IN METALS—*By W. L. Nelson* ..... *Page 40*

When metals are exposed to a repeating cycle of stress, such as that encountered by sucker rods, the material will fail at much lower stresses than the tensile strength commonly used as a measure of strength. Fatigue strengths are therefore very important guides in the selection of metals used for these purposes. Fatigue strengths and specifications of common materials used in oil producing activities are given.

AIR REPRESSURING IN THE COLMAR-PLYMOUTH FIELD OF ILLINOIS
By Millard H. Flood ..... *Page 44*

Secondary recovery methods are playing a more and more important role as a means of oil production, and promise to become even more so as reservoir pressures decline in fields that are now flowing. In the Colmar-Plymouth field of west central Illinois, the scarcity of natural gas required that the operators use air as a repressuring medium. Location of equipment and the distribution of repressuring lines to key wells are discussed; results of the repressuring operations on the well fluid levels and on daily production are pointed out.

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QUESTIONS ON TECHNOLOGY—*By C. K. Francis, Ph.D.* ..... *Page 53*

PROBLEMS FROM READERS—*By L. G. E. Bignell* ..... *Page 55*

Well Studies & Production

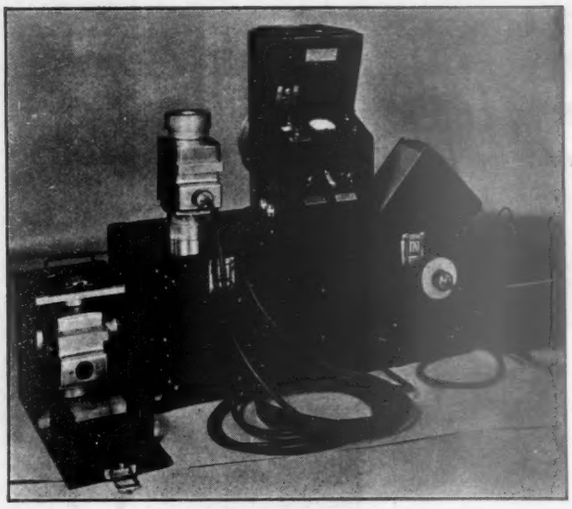

Fig. 1—Electrical strain gauge type of dynamometer

Well studies made with the aid of a polished rod dynamometer are becoming of increasing importance in the economical pumping of wells. Many companies have established departments whose sole purpose is to study pumping well problems.

The value of this type of work is two-fold. First, well studies permit a better selection of the proper sucker rod to meet the conditions in each individual well and second, a better knowledge of each individual well's characteristic makes it possible for the producer to get longer life out of his equipment. In other words, to get the life out of sucker rods which is built into them at the factory, the producer should know all the facts concerning conditions which they are up against.

The main consideration of this type of work has been the load characteristics of individual wells and their effects on sucker rods. From a practical point of view it is necessary to consider the well as a unit, thus not only taking in other pieces of equipment including the pumping unit and the pump, but also the consideration of the inherent characteristic of the well being pumped. These include the production history of the well, the corrosiveness of the fluid, the amount of gas present, etc. In doing this work one of the chief instruments used has been the electrical strain gauge type of dynamometer.

Electrical Strain Gauge Type

This type of instrument is illustrated in Figures 1 and 2. Figure 1 shows the instrument out of its carrying case with all the parts grouped together. Figure 2 shows it hooked up to the well being studied.

The load is measured by the amount of compression in the strain gauge placed between the hanger bar and the polished rod clamp. As the tube compresses it unbalances an electrical Wheatstone bridge circuit, thus causing a deflection of a galvanometer or oscillograph element. Deflection is measured by using a small light beam and recording it on photographic film, and is calibrated to read in actual pounds. The load is recorded with reference to polished rod position and the stroke component is taken directly off the beam hanger and transmitted to the instrument by means of a cord which operates a mechanism causing the oscillograph to oscillate. This instrument has the inherent advantage of being very sensitive and instantly responsive to any fluctuations in load.

Experience has shown that most practical results are obtained from well studies when each well is considered as an individual unit. Not only should all facts concerning the well itself be considered but also the service history and limitations of equipment.

In order to get the most out of a dynamometer study, it is first important to study over the office records concerning the well to be studied. This should include a detailed study of production from the well, a study of the down time on the well and the reason for this down time, and the detailed record of equipment failures.

The facts disclosed from these office records will show that many wells are pumping satisfactorily and that little can be done to better their operation. If a well is proved to be performing satisfactorily, then a dynamometer study may not prove economical.

Dynamometer Study

If the facts concerning a well are carefully studied before each dynamometer study is made, a more definite procedure can be established as to what to look for in the dynamometer cards. Often the records of the production of the well can give an indication of what to expect in making the dynamometer study. If it is found that the well has been producing with a low volumetric efficiency, it may be that the well is pounding fluid and this may be detrimental to the sucker rods and other equipment. On the other hand, the low efficiency may be due to other factors such as gas getting into the barrel, preventing it from filling with fluid or the tubing might possibly be leaking or the plunger may not be getting full travel due to excessive friction or an improper pumping cycle. A well which is operating with too low an efficiency is always worth studying and many operators agree that a pumping well should make at least 80 per cent volumetric efficiency based upon the polished rod stroke. Low efficiency is one good index of whether the well offers good opportunity for practical results in making a dynamometer study. Of course it is evidently worth making a study on a well that is giving excessive down time due to sucker rod or other mechanical breakage. This soon becomes self-evident.

One Kansas operator during the year of 1937 had a total of 224 pumping wells with only 300 pulling jobs. These pulling jobs included rod failures, pump repairs, tubing jobs, etc. Out of the 300 pulling jobs it was found that 141 occurred in 20 wells or 47 per cent of the pulling jobs occurred in only 9 per cent of the wells. It is evident that a large saving could be effected by carefully studying these wells in an endeavor to reduce the pulling costs.

Even with a few troublesome wells this pulling job record may certainly be considered excellent from the standpoint of operating costs. Most of this was accomplished by carefully watching the apparent volumetric efficiencies of the wells and making changes in pump setting and changes of pumping speeds and stroke so as to obtain good efficiency. Dynamometer studies were made only on the troublesome wells where the difficulty was not apparent. Some of these were in a very badly corrosive area and the trouble was due to sucker rod failures. This was corrected by installing larger tubing and larger rods in order to lower the stresses on the sucker rods.

Fig. 5—Peak load decreased by the use of a better adapted plunger

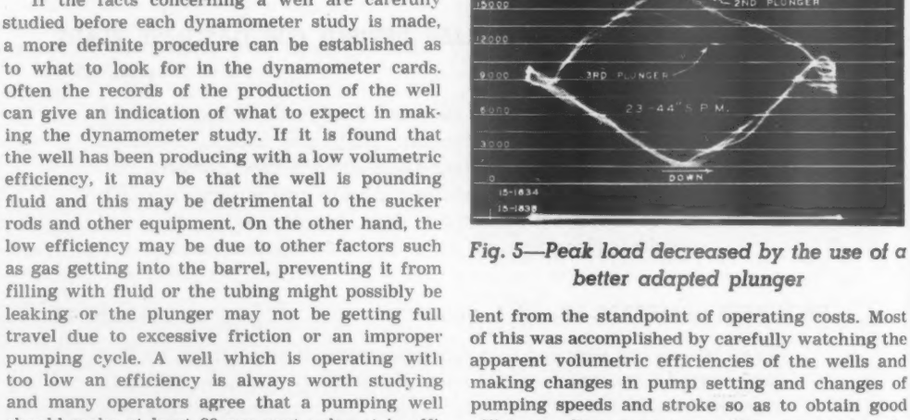

Fig. 3—Card showing excessive load and stretch of sucker rods

Fig. 4—Normal card after removing slack in tubing

as a Practical Procedure

It has been observed that usually most trouble on any one lease is encountered on comparatively few wells. A study of these troublesome wells will usually result in a great decrease in operating expenses.

In order to illustrate the necessity for considering each well as a unit, a few examples of well studies made on troublesome wells will be cited where the polished rod dynamometer was used to give very practical results.

Unnecessary Loads

Calculated loads may be a very useful index in studying the loads recorded by the dynamometer. This consideration may show that the load recorded is beyond reason. One case studied at Oklahoma City was a well where for some unknown reason production had fallen off and the load had increased to such an extent that the engine would no longer operate the well. The trouble was first expected to be in the engine and thought was being given to the use of a larger one. Only by slipping the clutch was it possible to turn the well over through a few strokes and get a recording of the load on the dynamometer.

The characteristics of the cards showed excessive friction down the hole and since the records did not show any evidence of a crooked hole, it was concluded that the tubing catcher near the bottom of the string had crawled up during the pumping motion so as to throw a slack in the tubing causing it to be slightly corkscrewed and resulting in excessive friction between rods and tubing.

A pulling unit was brought to the well and the top of the tubing pulled up 3½ feet. This took all the slack out of it and the well was put back to pumping without any difficulty. The actual result came very close to calculations and showed a decrease of about 9,000 pounds in the load. Figure 3 illustrates the dynamometer card taken on this well before the tubing was pulled up and Figure 4 shows the card afterward, indicating free movement of the rods and plunger.

In studying a number of troublesome wells for one producer in Kansas, one particular well was found which was quite a lot heavier than the others, weighing about 20,000 pounds. This particular well had a special pump condition. At a later date this well was again weighed and the load was only 17,000 pounds, the difference being that a new and better adapted pump had been installed.

It was decided to further experiment and the pump was pulled out and the plunger cut in half and rerun. The result was that the load was reduced 2,300 pounds operating at the same speed and stroke and maintained production. Figure 5 shows the two dynamometer cards taken on this well with the two plungers used. These cards have been superimposed one upon the other to show the differences in these load characteristics.

One of the difficulties in making polished rod dynamometer tests is to be sure that the load characteristic recorded is representative of the actual conditions which normally exist in the particular well being tested.

As mentioned above, a study of the office records may give a clue to know what kind of a condition may be expected. In a certain well in Seminole that had been giving considerable trouble, office records were checked and the efficiency was found to be very low and a pump off condition was suspected. Figure 6 is the dynamometer card taken on the well immediately after the instrument was installed and shows a full bodied card with no indication of low efficiency. The well was allowed to run for a period of about two hours and a recheck was made and another card taken which checked the first one very closely. It was then noted that the well was only running 19 strokes per minute whereas the office records had given the normal speed as being 22. The well was speeded up to normal operation and 20 minutes later pumped off and developed a severe pound. Figure 7 is the card showing the pound. Had not the records on this well been checked, the original card would have been taken as being representative and the dynamometer test would have been of little value. Further, experimentation was made on this well, reducing the speed to a point where the pump off was eliminated.

In another well at Fittstown, Okla., the records showed it to be making considerable gas. Also it was producing with a low volumetric efficiency which indicated that the gas was getting into the pump allowing it to fill only partially with fluid. The first card taken, shown in Figure 8, was of very small area and indicated that very little work was being done by the pump. A check at the bleeder showed that at this particular time the well was not producing any fluid and this meant that the pump was completely gas locked. In order to get a representative card, it was necessary to break down this gas lock condition. The well was speeded up so that the plunger would travel farther and increase the compression ratio, thus forcing the gas through the traveling valve. Figure 9 is a transition card taken to show the development of the normal pumping characteristics. The gas lock is broken and the well begins to pump.

Conclusions

The importance of keeping good office records on pumping wells should be stressed as these records make it possible to determine whether or not

(Continued on Page 38)

Fig. 2—Electrical dynamometer as it looks installed on a well

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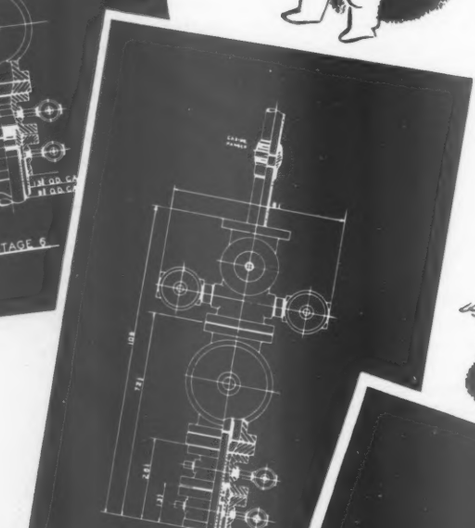

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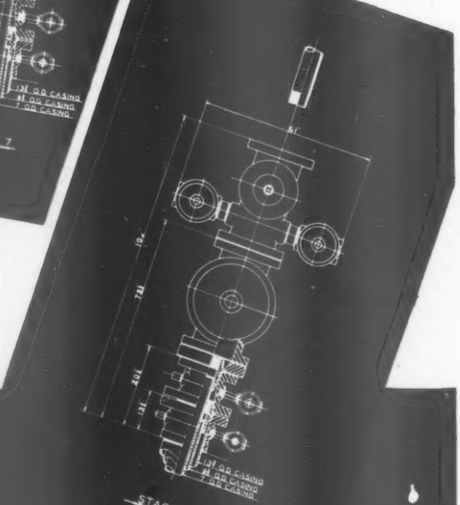

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Gas-Oil Ratio Flow Controller Devised for Gasoline Plant

By ANSON. W. DWEN
J. E. Crosbie, Inc.

With the gas-oil ratio flow controller shown in the accompanying cut, developed by D. B. Young, superintendent of our Fittstown, Okla., gasoline plant, automatic control may be procured at a very nominal cost due to the utilization of equipment already installed at the average plant. This device was awarded a prize at the "Operating Kinks" session of the recent N.G.A.A. annual meeting.

The ratio flow controller consists of two diaphragm assembly units opposing each other and actuating a bleed from an orifice to control a motor valve position in accordance with the variations of differential. In the case of all ratio controllers the differential across one orifice sets the differential across the second orifice by means of controlling the flow through this orifice. The upstream and downstream connections of the orifice in the line on controls are piped to one of the diaphragm assemblies of the ratio flow control. The upstream pressure connection is made to the bottom of the diaphragm assembly and the downstream connection is connected to the top of the diaphragm assembly at one of the differential diaphragm controlling units. A change in the flow through this orifice will reduce the pressure on top of the diaphragm of the differential unit, causing the diaphragm to be raised with a resultant increase of the crossarm connecting the differential diaphragm assemblies and increasing the bleed from the leak orifice, thereby decreasing the pressure on the motor valve diaphragm causing the motor valve to assume a new position.

In a like manner the upstream differential from the adjustable orifice in the control flow line is piped to the bottom of the second diaphragm differential assembly, and the downstream pressure piped to the top of this second differential diaphragm assembly. It is necessary to have the orifice adjustable in the line in which the flow is to be controlled so that this orifice can be adjusted to give the proper differential for calibration of the ratio flow control. It is also well to bear in mind that the control valve in the control differential line should abide by the rules of orifice meter setting and be far enough away from the variable orifice to not affect the flow across this orifice.

After the motor valve is placed in the proper position in the line a supply of operating medium is connected through an operating medium regulator to maintain the pressure on the adjustable orifice in the operating medium line constant. The discharge from the operating medium regulator is piped to an adjustable or fixed orifice, piped to the diaphragm of the controlled motor valve, and then to the leak orifice of the ratio flow control.

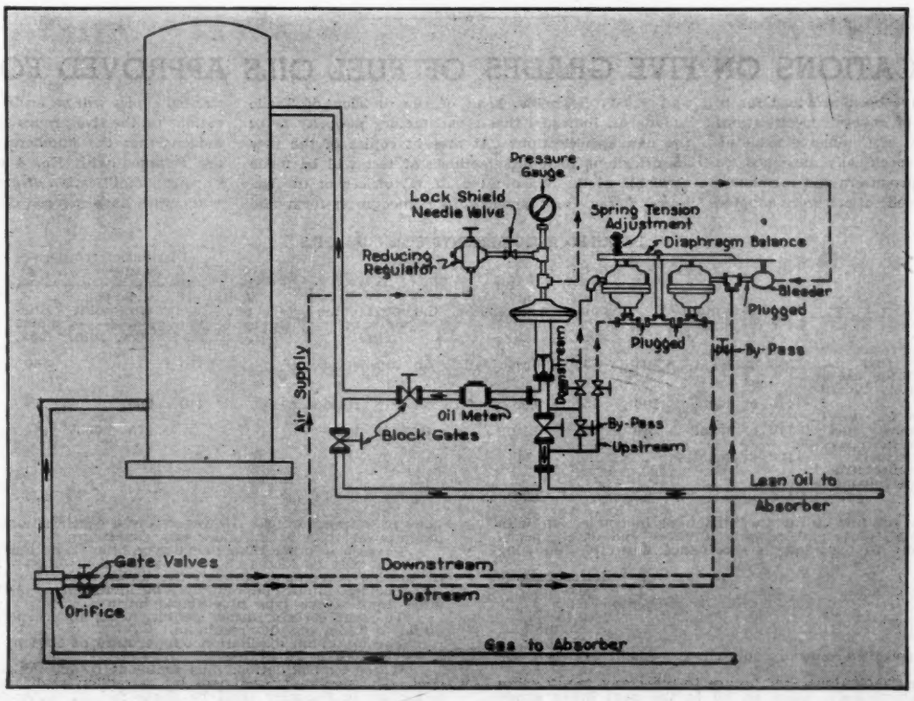
Protection Against Breakage

After the unit is placed in the system as indicated above, then the orifice pressure is connected to the differential diaphragm assembly by first opening the by-pass valve in the orifice connection line, then opening the line through the by-pass valve and to the differential diaphragm assembly as is the standard practice when placing a meter in operation. This precaution is merely to protect the differential diaphragms against breakage due to excess pressure in either direction.

With the unit entirely connected in the proper manner the flapper bar will assume a position of equilibrium set by the forces exerted by the differential of one line working on its diaphragm and the differential of the second line working on its differential diaphragm assembly. The adjustable orifice in the control flow line then has to be adjusted so the flow in this line is set at the proper amount due to the motor valve assuming the position dictated as a result of the differential in the two lines. By this we mean the adjustable orifice is adjusted for the proper flow as dictated by the ratio flow control which is a result of the differential on the uncontrolled line causing a force on the flapper bar which is counterbalanced by a force caused by the differential across the variable orifice exerting a force on the flapper bar in such an amount that the flapper permits the bleed from the leak in the proper amount, resulting in a diaphragm pressure on the motor valve giving the correct amount of flow through the controlled flow line as required by the installation.

An increase in the differential across the fixed orifice in the line will reduce the differential above the diaphragm of the ratio control unit, thereby causing the flapper bar to be moved away from the leak valve orifice. Moving the flapper from the leak orifice will decrease the motor valve diaphragm pressure causing an increase in flow through the controlled flow line. This increase in flow through the controlled flow line will increase the differential across the controlled orifice, decreasing the pressure on the top of the differential diaphragm of this unit causing the flapper to return toward the leak nozzle compensating for the change of differential in the control flow line, thereby causing a floating or throttling action of the motor valve in this line. Thus we see that the differential caused by the orifice in the one line works against the differential caused by the flow of liquid through the control flow line thereby positioning the valve in accordance with the area relationship of one orifice to the other.

In case these orifices are at wide variance as to change of differential it is sometimes found necessary to compensate for this variation with a spring riding directly on the flapper bar. This spring will exert a force working against the differential on one of the orifices and working with the orifice having the least differential. As the movement of the flapper bar is very small the variation in force caused to compress the spring is negligible and



Layout of equipment for controlling the relationship between the oil and gas flows

the spring can be assumed for all practical purposes as a constant force.

In a gasoline plant with fluctuating gas volumes, it is hard to operate with correct gas and oil ratios in the absorber and subsequent oil and steam ratios in the distillation equipment due to the fact that in the average plant oil circulation, steam agitation, etc., is hand controlled. Taking the hook-up in the average plant, we find that the absorber has an orifice meter installed on the gas inlet; a meter on the oil inlet, the intake being hand controlled; and a motor valve dump on the oil discharge. All absorbers discharge to a common surge or vent tank, the level of which is controlled by a valve on the vapor vent, actuated by a kidney on the tank. The fat oil pump takes its suction from this vent tank and discharges through the heat exchangers to the still and is also hand operated, and in the case of a centrifugal pump, by the opening or shutting of the discharge gate. Then to follow through, with the increase or decrease of oil to the absorber and subsequent increasing or decreasing of the oil to the still, the steam agitation to the still needs must be controlled which is also done by hand.

In the operation of the above flow controller, in the case of the absorber, the motor dump valve is installed on the oil inlet to the absorber and is operated by the flow controller, which in turn is actuated by the differential across the orifice flange on the gas inlet. This changing of the dump valve position leaves the absorbers with no level control and dumping direct to the surge or vent tank, in which the level is controlled by a motor valve on the discharge of the fat oil pump actuated by the kidney on the vent tank. The old vapor vent is tied into the battery of absorbers which equalizes the pressure.

The fat oil pump then discharges through the heat exchangers and into the still through an orifice flange. In the steam agitating line to the still a motor valve is installed which is actuated by the flow controller which in turn is operated by the differential across the orifice flange in the oil line to the still.

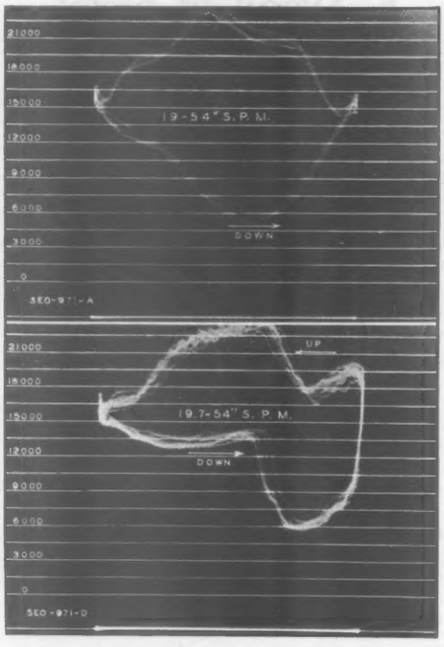
One can readily see the saving resulting from the above installation in that the arrangement utilizes all of the equipment in the original setup, and with the addition of some inexpensive material automatic control of the more vital points in gasoline plant operation may be secured.

Well Studies

(Continued from Page 35)

a well study would prove to be of an economic advantage. These records should be in such a form that they may readily be gone over from time to time to determine the performance of any one well.

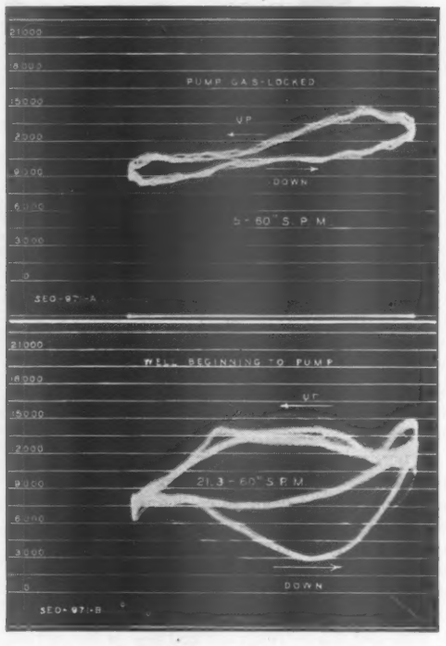
When a dynamometer study is made on a particular well, great care should be taken to be sure that the card is representative of what is consid



Figs. 6 and 7—(Upper) Dynamometer card shows no evidence of fluid pound or low pump efficiency. (Lower) Severe fluid pound showing low pump efficiency developed after two hours' operation

ered normal operation as often dynamometer cards can be obtained which will conflict with the facts which are kept in the records.

Trying to cure a sick well without a record on the well is a little bit like a doctor trying to diagnose what is wrong with the patient without the patient giving him any information about himself.



Figs. 8 and 9—(Upper) Dynamometer card showing complete gas locks of the pump. (Lower) Faster operation breaks gas locks and well begins to pump and develop normal load characteristics

From the work which has been done on pumping wells in the last three years and the many practical operating results obtained there is little doubt that there is a large field for the further reduction of lifting costs through an extended application of the knowledge and experience available.

SPECIFICATIONS ON FIVE GRADES OF FUEL OILS APPROVED FOR USE

Five grades of fuel oils have been provided for in the accepted standard series of revised specifications issued by the U. S. Department of Commerce made effective May 31, 1938, and specifically designed as CS12-38. A survey of fuel oil producers and consumers were undertaken before the specifications were adopted and F. W. Reynolds, head of the division of Trade Standards, indicated that a satisfactory majority favor the new specifications. At present copies of the new specifications including methods of test will be made available at the Washington, D. C., offices of the National Bureau of Standards in mimeograph form and printed copies will be made available later. The specifications on the five grades appear below and it becomes evident that the numbers of the corresponding fuels are retained with No. 4 eliminated in the revision. Further simplification of grades may be attempted and authorities have favored limiting the number to three.

DETAILED REQUIREMENTS FOR FUEL OILS[1]

Grade[2]—	Flash point °F. min.	Flash point °F. max.	Pour-point °F max.	Water and sediment per cent max.	Carbon residue per cent max.	Ash per cent max.	Distillation temperatures °F. 10 cent point max.	Distillation temperatures °F. 90 per cent point max.	Distillation temperatures °F. 90 per cent point min.	Distillation temperatures °F. End-point max.	Viscosity seconds Saybolt universal at 100° F. max.	Viscosity seconds Saybolt universal at 100° F. min.	Viscosity seconds Saybolt furol at 122° F. max.	Viscosity seconds Saybolt furol at 122° F. min.
No. 1 fuel oil—a distillate oil for use in burners requiring a volatile fuel	100 or legal	165	15[3]	Trace	0.05 on 10% residuum[4]	...	410	...	...	560[5]	...	...	...	...
No. 2 fuel oil—a distillate oil for use in burners requiring a moderately volatile fuel	110 or legal	190	15[3]	0.05	0.25 on 10% residuum[6]	...	440	600	...	...	...	...	...	...
No. 3 fuel oil—a distillate oil for use in burners requiring a low viscosity fuel	110 or legal	230	20[3]	0.10	0.15 straight	...	...	675	600[7]	...	55	...	...	...
No. 5 fuel oil—an oil for use in burners requiring a medium viscosity fuel	130 or legal	...	..	1.00	.....	0.10	...	...	...	...	...	60	40	...
No. 6 fuel oil—an oil for use in burners equipped with pre-heaters permitting a high viscosity fuel	150	...	..	2.00[8]	.....	...	...	...	...	...	...	...	300	45

[1]Recognizing the necessity for low sulfur fuel oils used in connection with heat-treatment, nonferrous metal, glass and ceramic furnaces and other special uses, a sulfur requirement may be specified in accordance with the following table:

Grade of fuel oil	Sulfur, max. %
No. 1	0.5
No. 2	0.5
No. 3	0.75
No. 5	No limit
No. 6	No limit

Other sulfur limits may be specified only by mutual agreement between the buyer and seller.

[2]It is the intent of these classifications that failure to meet any requirement of a given grade does not automatically place an oil in the next lower grade unless in fact it meets all requirements of the lower grade.

[3]Lower or higher pourpoints may be specified whenever required by conditions of storage or use. However, these specifications shall not require a pour-point lower than 0° F. under any conditions.

[4]For use in other than sleeve type blue flame burners carbon residue on 10% residuum may be increased to a maximum of 0.12%. This limit may be specified by mutual agreement between the buyer and seller.

[5]The maximum endpoint may be increased to 590° F. when used in burners other than sleeve type blue flame burners.

[6]To meet certain burner requirements the carbon residue limit may be reduced to 0.15% on 10% residuum.

[7]The minimum distillation temperature of 600° F. for 90% may be waived if A.P.I. gravity is 26 or lower.

[8]Water by distillation, plus sediment by extraction. Sum, maximum 2.0 per cent. The maximum sediment by extraction shall not exceed 0.50 per cent. A deduction in quantity shall be made for all water and sediment in excess of 1.0 per cent.

Interest is not profits

Third grade gasoline is still attracting much interest on the part of buyers and seems to be quite scarce
—CHICAGO JOURNAL OF COMMERCE, June 8, 1938

Interest on the part of buyers doesn't mean profits in the pockets of refiners —not on third grade You know how little you can get for it

It's a good thing it is "quite scarce" because the market for it is as slim as the price

Dubbscracking is the way to make gasoline—always

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Progress in METALS

By W. L. NELSON

Repeated Loading of Metals

When metals are exposed to a repeating cycle of stress such as that encountered by sucker-rods, pump rods, shafts, railroad rails, etc., the material will fail at much lower stresses than the tensile strength or elastic limit that is commonly used as a measure of strength. The "fatigue" or "endurance limit" is used in designating such strength and may be defined as the maximum stress that a material can sustain under conditions of repeated loading and unloading. It is usually found that if the material has not failed in 10,000,000 reversals of stress it will never fail.

The fatigue strengths shown in Table 1 serve to forcefully indicate the low strength of materials under conditions of repeated loading. Although the fatigue limit is often said to be about 50 per cent of the ultimate or tensile strength, the relationship is not a consistent one unless the comparison is restricted to a particular group of steels being tested under similar conditions.

The vital importance of notches or irregularities on the surface of a metal cannot be overlooked. This is evident in Tests 4a, b, c, d, and 8a, b in the table. It is customary to machine the specimen for test, to a uniform cross-sectional dimension. With Specimen 4a, large 1-inch fillets connected the reduced section to the ends which were fastened to the endurance machine. This specimen exhibited an endurance strength of 47,000 pounds per square inch, whereas Specimen 4d of the same material but having a V-notch reduced section showed a strength of only 19,000 pounds per square inch. Thus, the ability of a machine part to withstand fatigue conditions is dependent largely upon the design of the part. Sharp shoulders or notched sections should be avoided and if changes in section are unavoidable, the corners should be rounded so that the stress will be distributed throughout the entire material rather than confined to the notched section.

Perhaps the worst condition that can be encountered is a combination of corrosion and fatigue. The extremely low strength of sucker-rod materials under such conditions is indicated in Classes 1, 2 and 3 in Table 1. Tests No. 5a, b and c, show the increase in endurance limit that is possible by quenching and tempering; and Tests 5-8 show the endurance limits of welds.

References

1. Bulletin 124, University of Illinois, 1920.
2. W. M. Wilson, "Fatigue Tests of Butt Welds in Structural Plates," Welding Journal, page 23, Oct., 1937.
3. Westcott and Bowers, "Corrosion Fatigue and Sucker-Rod Failures," A.P.I., Chicago, 1933; The Oil and Gas Journal, page 65, Oct. 26, 1935.

Strainers for Oil Wells

Strainers for the elimination of sand from crude oil are necessary in many fields because the sand rapidly erodes the cups or plungers of the pump. The strainers themselves are not particularly expensive but if they become corroded and allow sand to enter the pump, the cost of removing and repairing the pump are important expenses. Thus, in fields in which the sand is somewhat loose and of fine texture such as those encountered in the coastal fields of Louisiana and Texas, and in many other areas, the life of the strainer is an important element.

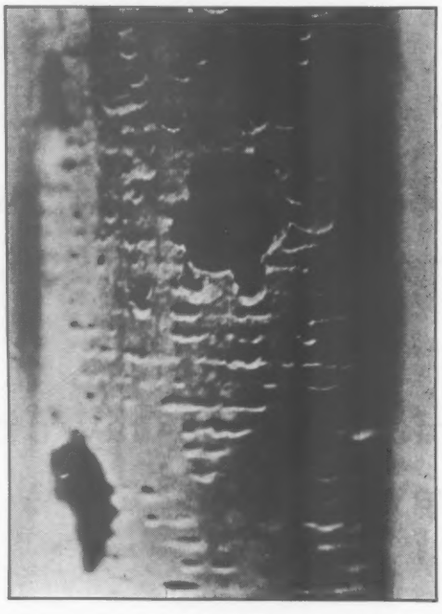


Fig. 1—Corroded strainer pipe. Above photograph taken from INCO Magazine, Vol. IX, No. 4, in article "Field Tests Develop Improved Strainer"

The mesh opening in a strainer is usually between 0.006 and 0.0013 inch, and hence if the material corrodes to form an insoluble and adherent scale, the scale may plug the strainer and lower production. The strainer may also be attacked so vigorously by corrosion that holes appear and its usefulness is destroyed. These type of failure are illustrated in Figures 1, 2 and 3 which were taken from Gill, Inco Magazine, Vol. 9, No. 4.

Of all of the materials that were tested by Gill,

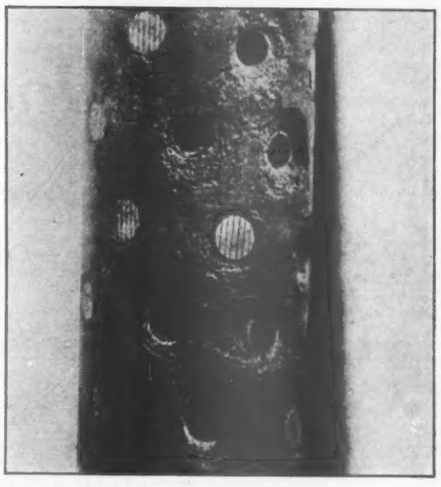


Fig. 2—Corrosion of button-type strainer

pure nickel appears to be the most successful. In wells of the Gulf Oil Co. in the Spindletop and Goose Creek fields, nickel strainers lasted from 5 to as much as 42 times as long as plain steel strainers.

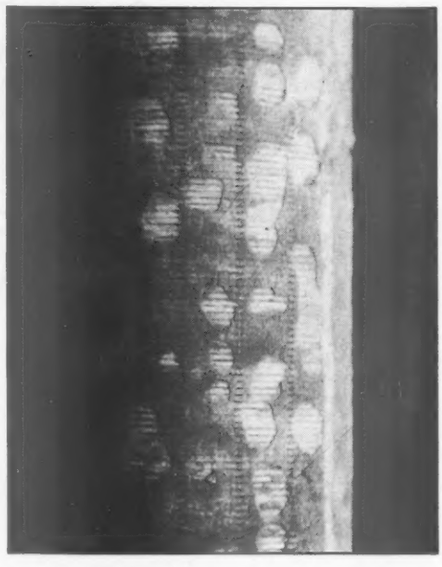


Fig. 3—Wire-wrapped strainer sealed off by corrosion products

TABLE 1—FATIGUE LIMIT OF COMMON MATERIALS USED IN OIL PRODUCTION

No.	Material—	Per cent carbon	Strength, lbs./sq. in. Tensile	Endurance	Tensile over endurance strength	References	Notes—
1a	Wrought iron	.03	47,000	30,400	.64	3	In air
1b	Wrought iron	.03	47,700	19,600	.41	3	In oil-well water saturated with natural gas
1c	Wrought iron	.03	47,000	16,400	.34	3	In oil-well water sat. with nat. gas and hydrogen sulfide
2a	1.25 Manganese steel	.36	100,000	48,900	.49	3	Same as 1a
2b	1.25 Manganese steel	.36	100,000	19,600	.20	3	Same as 1b
2c	1.25 Manganese steel	.36	100,000	14,600	.15	3	Same as 1c
3a	3.5 Nickel wrought iron	.04	62,500	40,100	.64	3	Same as 1a
3b	3.5 Nickel wrought iron	.04	62,500	25,600	.41	3	Same as 1b
3c	3.5 Nickel wrought iron	.04	62,500	14,900	.24	3	Same as 1c
4a	Carbon steel-sorbitic	.49	.....	47,000	..	1	1-inch fillet radius to reduced section
4b	Carbon steel-sorbitic	.49	.....	44,500	..	1	One-quarter-inch fillet radius to reduced section
4c	Carbon steel-sorbitic	.49	.....	23,500	..	1	Square shoulder to reduced section
4d	Carbon steel-sorbitic	.49	.....	19,000	..	1	V-Notch to reduced section
5a	Carbon steel-pearlitic	.93	.....	30,000	..	1	Annealed
5b	Carbon steel-sorbitic	.93	.....	56,000	..	1	Quenched and tempered
5c	Carbon steel-troostitic	.93	.....	99,000	..	1	Quenched and tempered
6	Plate with mill scale	.15	61,800	30,300	.49	2	
7	Riveted joint	.15	63,250	27,130	.43	2	
8a	Welded joint	.15	54,500	21,800	.40	2	As welded condition
8b	Welded joint	.15	54,500	27,900	.51	2	Planed flush with plate on both sides

OPERATING IDEAS

Centrifuge by Gas Pressure

A large pipe line company, operating in the Palestine, Texas, field, has a very unique centrifuge unit for the gauger running the gravity on each tank battery. This consists of a steel pedestal made from a piece of 12-

inch pipe with a 24-inch table which incloses the centrifuge. This has a rotary gas turbine which will run this at the necessary revolutions per minute needed to make the tests.

Safe Ladder Support

To support and protect the end of the ladder two short sections of pipe were sunk in the ground below the ladder, and firmly grouted in. When set, the tops of these twin pipes come just high enough to permit the ends of the short section of ladder to be slipped within them; thus steadying the ladder and

making the bottom section as rigid and safe to climb as the ones higher in the derrick. The short section of ladder can be lifted free of the supporting pipes when desired after the fish plates have been disconnected.

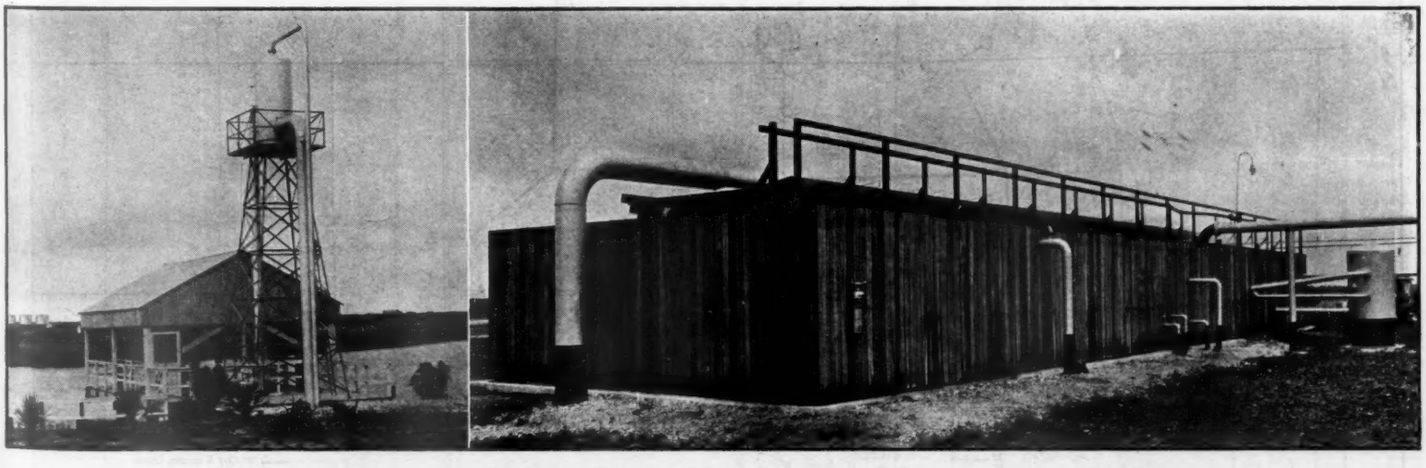
Stationary Pipe Cleaner

Stationary cleaning and priming plant, in a gas company's yard at Long Lake, Texas. This cleaning machine, formerly used on line reconditioning work, has been placed on stationary mounting, and the priming machine is installed to paint the pipe after it passes through the cleaning machine.

Cap and Lock Over Valve

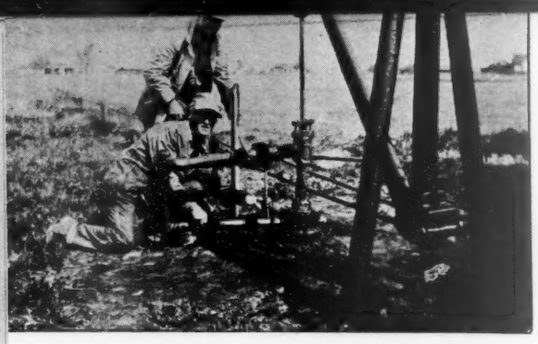
To eliminate tampering with transfer lines on a gathering system in the Cotton Valley field of Louisiana, one pipe line company has designed a locking cap for the extended

valve stem so this cap can be locked with an ordinary padlock. The cap is constructed from a piece of 6-inch casing closed at the end. A tongue is bent and welded to the cap, fitting in a slot 2 inches below the top of the casing. On the lock side is another slotted tongue with a piece of steel, containing a hole for the lock, working in the slot.



Lift Water From Bay With Gas and Cool With Tower of Unusual Design

A large oil company operating a natural gasoline plant on the Gulf Coast in the Dickinson pool has an abundance of fresh bay water within 100 feet of the plant. This water is gas-lifted from the bay to a small, elevated tower (shown in the left photograph) from which the water is circulated through the cooling tower and the plant. By this method the necessity for a large cooling tower is eliminated.



Producing oil well showing connections and method of testing the casinghead volume of returned gas used in conjunction with the repressuring operations. This connection is termed a 2½ by 8 gas metering hookup used in the gas measurement society.

Air Repressuring Plymouth Field

By MILLARD H. FLOOD
The Ohio Oil Co.

The primary purpose of this report is to present discriminately the history and effect of repressuring operations as carried on in the Colmar-Plymouth oil field, Hancock and McDonough counties, Township 4n, Range 4w, State of Illinois, by the Ohio Oil Co.

The Colmar-Plymouth oil field is located in the west central part of the state, southwest of Macomb and directly east and south of the village of Colmar. The developed productive area in the oil pool east of Colmar, later referred to as the "East Pool," consists of approximately 1,800 gross acres while the oil pool north of Plymouth and south of Colmar, later referred to as the "South Pool," consists of approximately 450 gross acres owned by the Ohio Oil Co. This gives a total gross proven area for the entire Colmar-Plymouth pool of 2,450 acres, the greater part of which is located in McDonough County with a portion lying in Hancock County on the western edge of the south pool. Approximately 200 acres of the 2,450 are developed and operated by individual producers.

In the year 1912, when the geological survey of the Colchester and Macomb quadrangles was completed, only five deep wells had been drilled on them. One of these was the city water-well at Macomb, Illinois, and the other four were drilled near the town of Birmingham by the Schuyler Oil & Gas Co.[1] No oil or gas has been found in commercial quantities although there were small showings of oil in three wells near Flour Creek in section 9-3n-4w, and it was reported that about 2 bbls. could be bailed out daily from the well on the flood plain of Crooked Creek in section 2-3n-4w. The latter was shot at 435 feet near the base of a 20-foot oil sand. The geologic information derived from the drilling of the Birmingham well in section 9 shows that they were not located on the Colmar anticline.[1]

Discovery of Hoing Sand

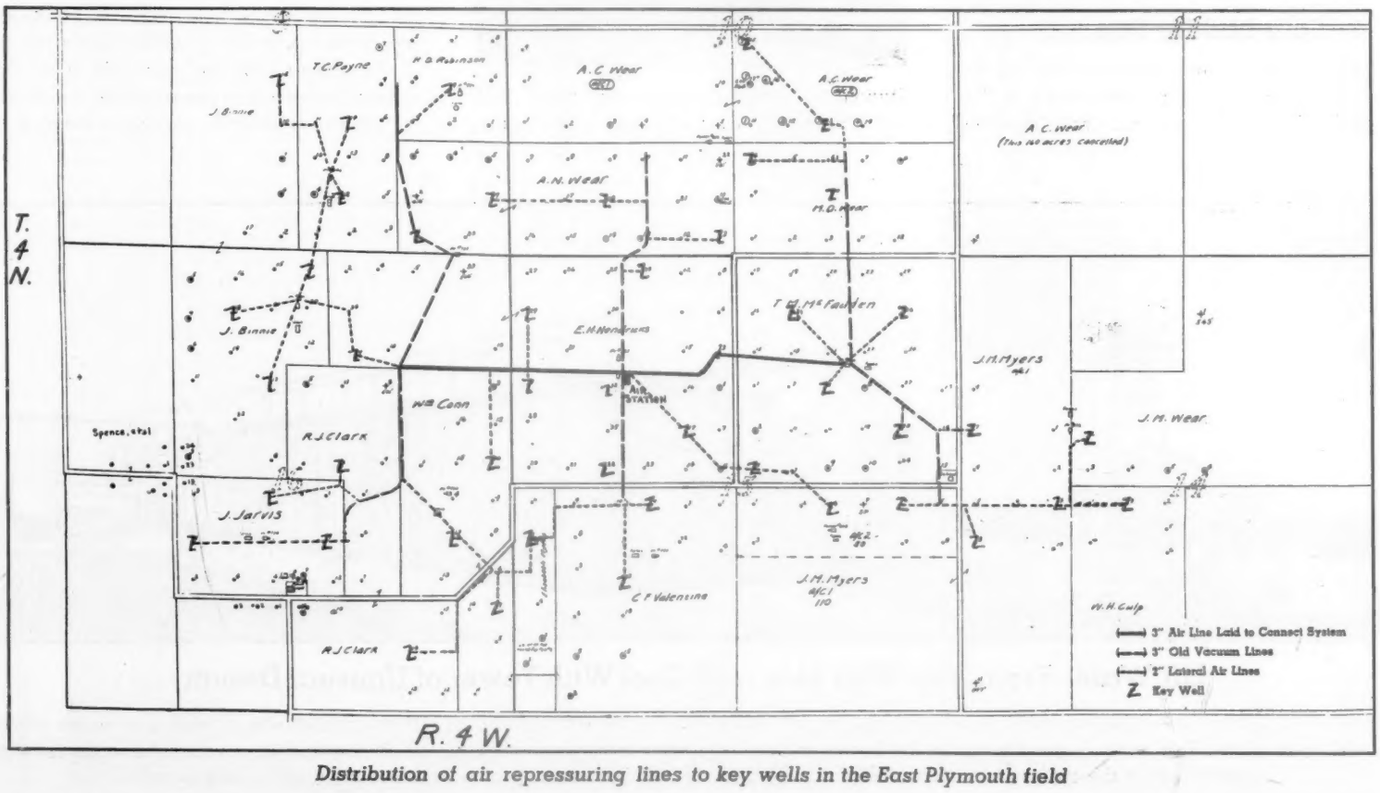
On March 5, 1914, a showing of 5 gallons of oil in a 425-foot well in section 20-4n-4w, Lamoine Township, and the prospecting that followed, resulted in the opening of the Colmar pool on the Joseph Hoing farm in the SE cor. SW quarter NW quarter section 16-4n-4w, of the same township.[2] This well was drilled jointly by the Ohio Oil Co. and Snowden Brothers. The oil was found in a sand, later known as the Hoing sand, at a depth of 417 feet. The boom was on and by the end of 1914, approximately 200 wells had been drilled in the Colmar district, of which 59 were dry. The initial output of the 141 producers amounted to 3,989 bbls.

The pool developed in 1914 lies in a flat part of the oil sand at the northeast side of a low, well defined dome, the top of which had produced only small showings of oil up to 1915.[3] Roberts well No. 1 near the center of section 24, St. Marys Township, Hancock County, was located at the south end of the dome and produced 45 bbls. initially flowing with 75 pounds rock pressure. Others were drilled immediately but all of them found salt water in the sand.

In July, 1915, drilling on the Hamm farm at the apex of the dome in section 14-4n-4w, Lamoine Township, developed wells good for 100 bbls, and this pool, known as the Plymouth pool, furnished most of the development of the year.[3] Another small area of good production was located near the city of Colmar, in the south part of section 18 of the same township.

The Hoing oil sand, which contains most of the oil discovered in commercial quantities, consists of well rounded quartzitic grains and lies in lenses on top of the Maquoketa shale and under Devonian limestone.[4] It accumulated in depressions on the top of the Maquoketa shale and was formerly interpreted as Silurian in age but recent studies indicate that its age is Devonian.[3] Owing to the conditions under which it was deposited and in part to the subsequent erosion, the Hoing sand is irregularly distributed and is absent in many districts; in its largest productive area it ranges from 5 to 30 feet and averages 14 feet in thickness.

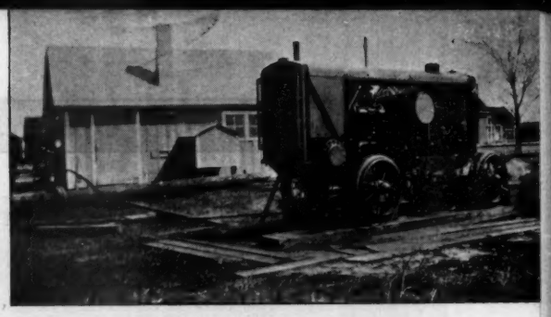
The oil is green, is without gas, and has an av-



Distribution of air repressuring lines to key wells in the East Plymouth field

in Colmar-

of Illinois



Portable compressor used for testing prospective repressuring operations

erage gravity of 36 to 37 and is classified as sweet oil because of its small sulfur content.

No direct connection is apparent between the Hoing sand pool east of Colmar, where the sand lies 90 feet above sea level, and the Plymouth pool in which the sand is 70 feet higher.[3] Likewise the pool at the town of Colmar lies on the north side of the dome and probably has no direct connection with either sand of the other pools.

The dome in the oil sand conforms very closely in position and amount to the arching of Colchester (No. 2) coal which was mapped by Hinds in 1912.

Need for Secondary Recovery

In November, 1915, 106 wells belonging to the Ohio Oil Co. yielded approximately 3,450 bbls. per week. Most of the oil was produced by the comparatively small number of wells in the new Plymouth pool. In 1915, 130 wells drilled in McDonough County had an initial production of 2,592 bbls. per day, 32 being dry. From the years 1916 to 1936 there had been little drilling activity within this area except for some wildcatting which resulted in the belief and emphasized further the "spotty" character of the Hoing sand. It is believed that favorable geological structure exists outside the Colmar-Plymouth pools but the prevailing absence of the sand is a troublesome factor.

Analyzing the natural course of events, both past and present, we find that both Hoing oil sand pools are approaching their economic limit and that some type of secondary method of recovery is necessary.

It was decided to start some experimental work on repressuring and at the same time the south pool seemed to be the most logical place considering all preliminary field and office observations. Also it was ideal for testing because it was small in extent and carried the same general characteristics of the sand as did the east pool, yet there was no relation structurally between either the east pool or the small pools north and south of Colmar.

The repressuring medium used is air as the gas formations were depleted in the early life of the field. There was originally very little gas with the oil either free or in solution. The propulsive energy was water. The first power installation included a gas engine. This was run for a short time and then all prime movers to be installed were oil engines.

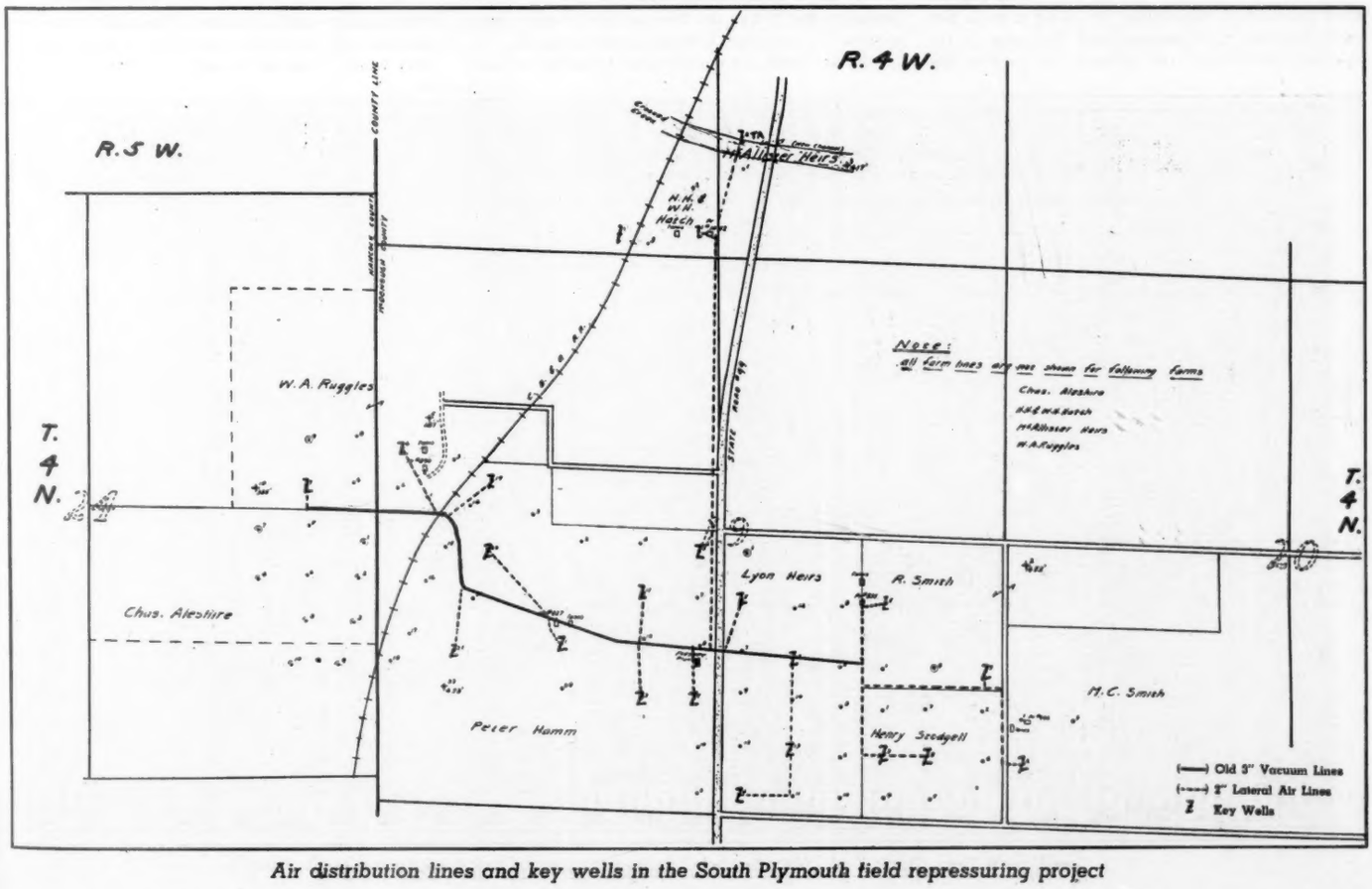
A central repressuring plant was located on the Hamm lease in the south pool in section 19-4n-4w, the pressure plant consisting of a tandem, two-stage compressor, 10½- by 4¾- by 12-inch, driven by a semi-diesel, 35-horsepower oil engine. The compressor is not used as a two-stage unit but each cylinder is used independently of each other and discharges into a main header where the air is distributed through a lateral supply system to the key wells. The old vacuum system was utilized in this program. Expected requirements were indicated as low pressures and high volumes.

On February 10, 1934, the first key well was placed in operation on the Hamm lease, well No. 1, with a volume of 79,000 feet per 24 hours at a pressure of 45 pounds. This soon proved that the above volume was too much so additional key wells were added and by June 1, 1934, there were nine key wells in operation averaging 40,000 feet with a maximum pressure of 50 pounds. Early tests show the sand to be very porous and that bypassing is an early hazard.

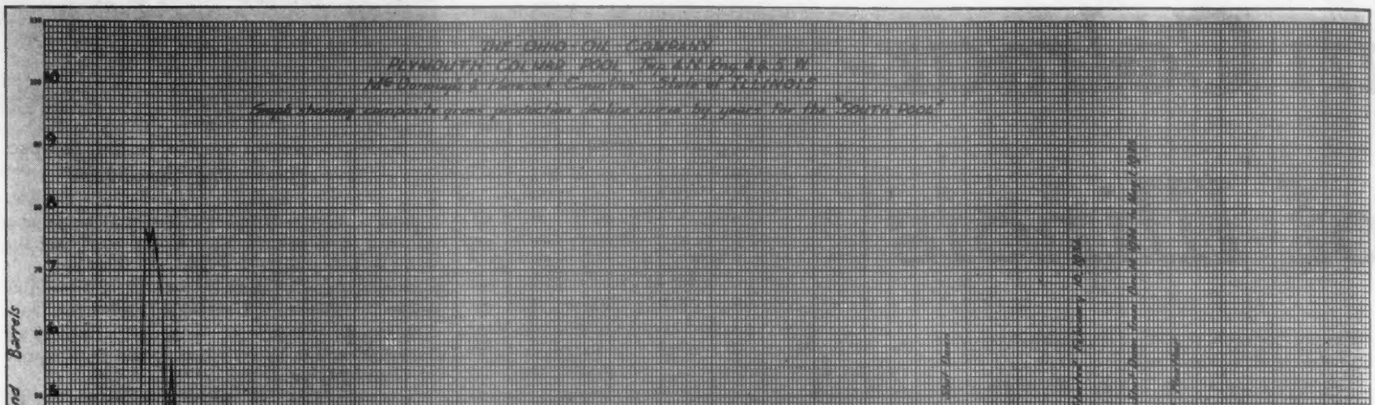
With the nine key wells in operation, an increase in oil production was noticed within a week. Then additional key wells were added periodically until a total of 21 key wells had been installed. By this time No. 1 Hamm, the original key well, was abandoned on March 1, 1936, due to bypassing to an offset oil well and then placed on the pump. McAllister Heirs No. 2 well was abandoned as a key well on September 29, 1934, but has just recently been placed in operation again. This makes a total of 19 active key wells for the entire south pool.

The average input for the 19 key wells has been approximately 10,000 to 12,000 cubic feet per 24 hours per key well for the entire period.

In the course of events from 1934 to the present there have been no major changes in the entire project except where bypassing was encountered and, in order to overcome this, the fluid levels in each oil well were raised as they began to show high oil-air-gas ratios. They were then adjusted so the fluid level would cover the sand at all times. Some measured as high as 136 feet of fluid in the hole with the working barrel pumping with a flood



Air distribution lines and key wells in the South Plymouth field repressuring project

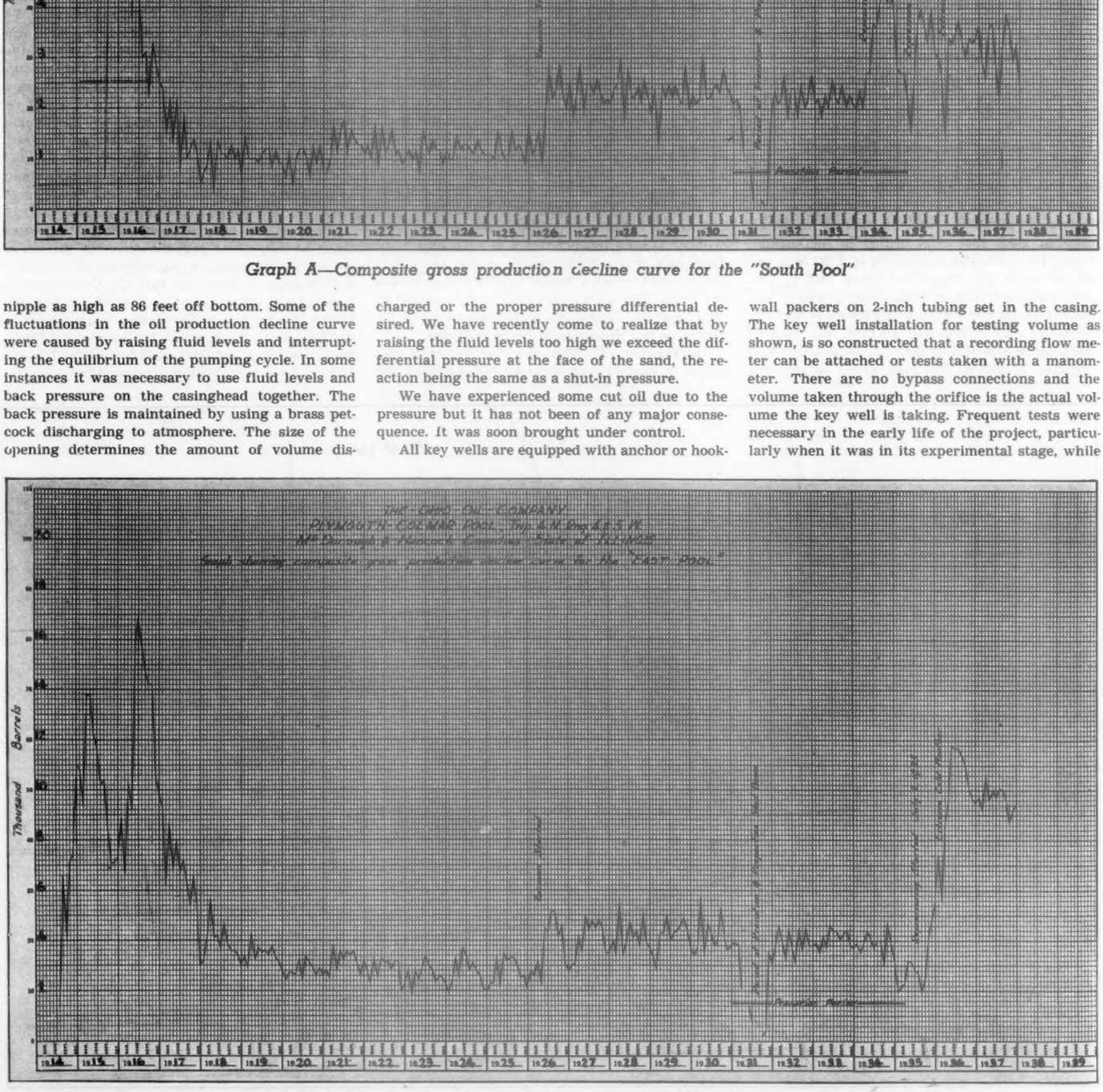


Graph A—Composite gross production decline curve for the "South Pool"

nipple as high as 86 feet off bottom. Some of the fluctuations in the oil production decline curve were caused by raising fluid levels and interrupting the equilibrium of the pumping cycle. In some instances it was necessary to use fluid levels and back pressure on the casinghead together. The back pressure is maintained by using a brass petcock discharging to atmosphere. The size of the opening determines the amount of volume discharged or the proper pressure differential desired. We have recently come to realize that by raising the fluid levels too high we exceed the differential pressure at the face of the sand, the reaction being the same as a shut-in pressure.

We have experienced some cut oil due to the pressure but it has not been of any major consequence. It was soon brought under control.

All key wells are equipped with anchor or hook-wall packers on 2-inch tubing set in the casing. The key well installation for testing volume as shown, is so constructed that a recording flow meter can be attached or tests taken with a manometer. There are no bypass connections and the volume taken through the orifice is the actual volume the key well is taking. Frequent tests were necessary in the early life of the project, particularly when it was in its experimental stage, while



Graph B—Composite gross production decline curve for the "East Pool"

now tests are taken only once or twice a month depending whether there has been some form of interruption to the main plant or key wells. Individual volume tests of the return air-gas mixture of all oil wells are taken once a month except when other details demand it to be taken more frequently. This test permits us to check our volume return against the air volume injected for the same period. Key wells were selected from the oil wells that had been producing. There were no new wells drilled for key wells in the south pool.

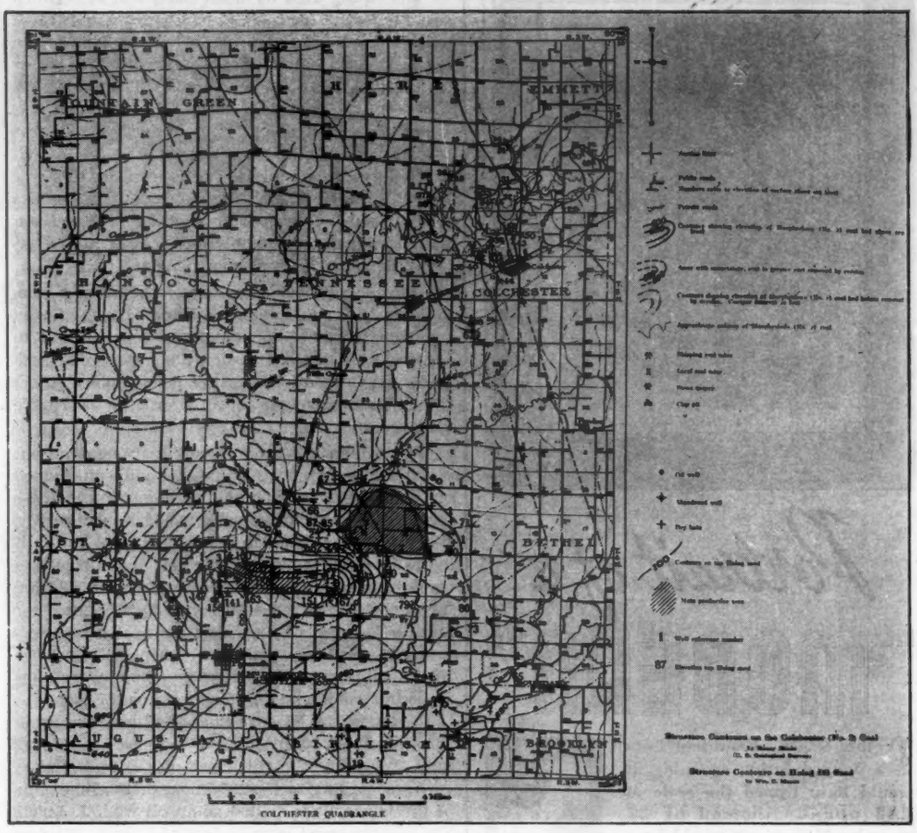
The average sand thickness for the south pool is from 10 to 12 feet for the entire area. The formation is characterized as a white, clear quartz sand with grains from one-eighth mm. to 1 mm. in diameter and subangular to rounded in shape. Some laminations of petroliferous shale are apparent. Very little scientific information is available on the Hoing sand at present.

Soon after repressuring operations in the south pool proved successful, it was decided to repressure the east pool.

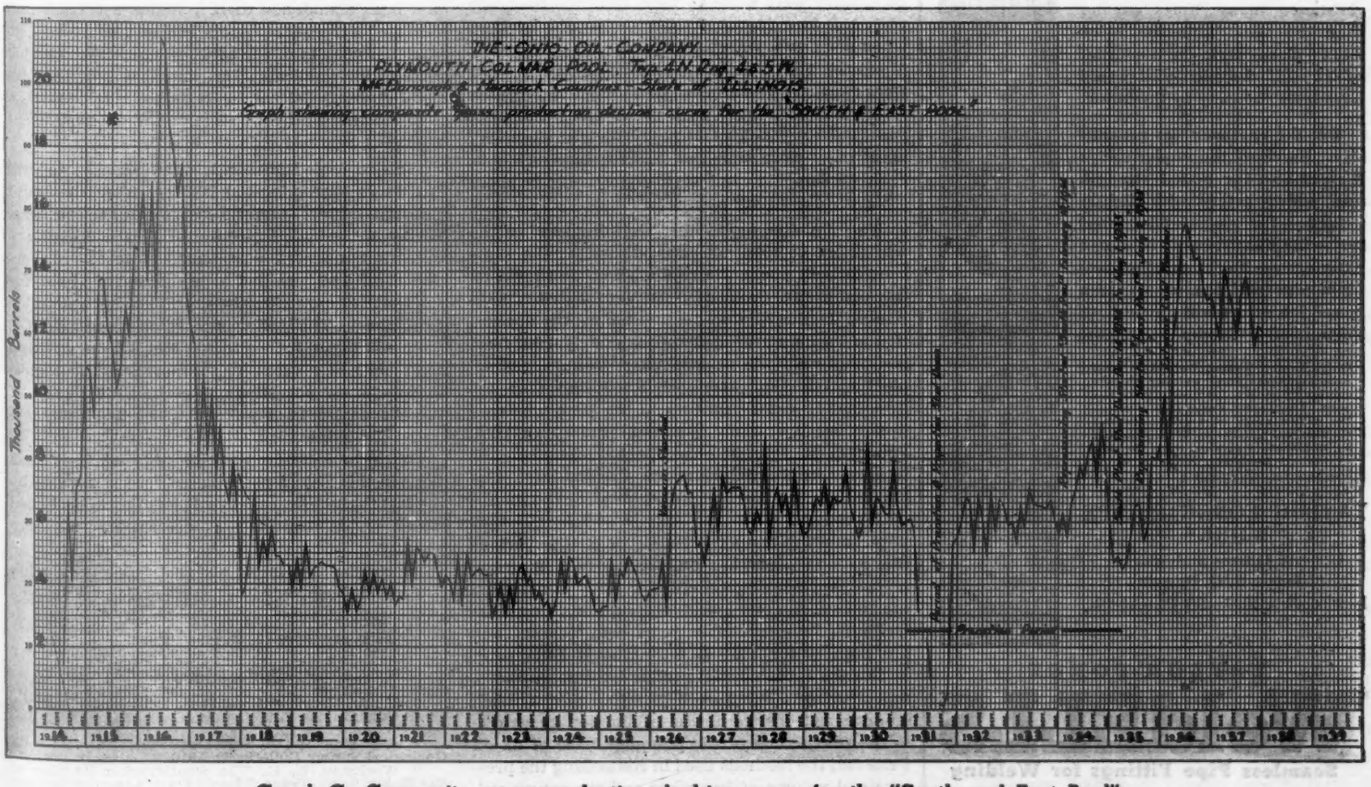
A centralized repressuring plant was located on the Hendricks lease in Section 14, Township 4n, Range 4w. The pressure plant consists of three duplex units with 8½ by 10-inch cylinders driven by a 35-horsepower oil engine. Each cylinder operates independently of the other, discharging into a header where the air is transferred to the main system.

After completing the repressuring plant, one unit was started on July 2, 1935, serving six key wells. The first to be placed in operation was No. 32 Hendricks with a volume input of 14,000 cubic feet per 24 hours. Successive key wells were turned on as they were cleaned out and completed for injection. By November, 1935, 46 key wells were in operation with two units running at a discharge pressure of 50 to 60 pounds. The present number of key wells in operation is 47.

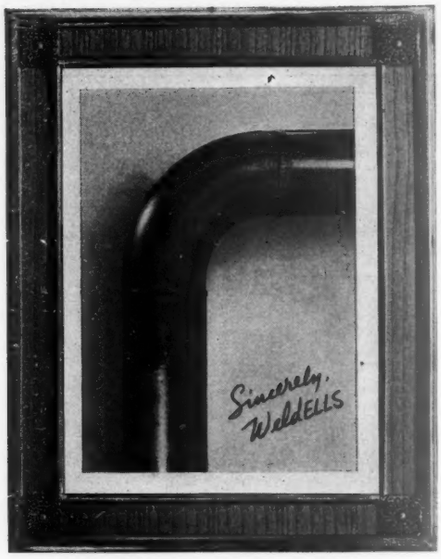
Key well installations are the same as the south pool except that air is injected through the casing on four wells with the surface equipment the same. The original oil wells were converted into key wells. During the year 1934 our experience with the pressure on the south pool taught us that it was very vital to know more about the general characteristics of the sand, so it was decided that a key well was to be drilled the next year. The well was located on the McFadden lease in section 15, known as No. 31, 660 feet from the north and west lines of the northwest corner of the lease. Drilling was started on August 20, 1934, and com-



Structural contour map of the Colmar-Plymouth area in west central Illinois. (Taken from Bulletin 33, Plate III, of the Illinois State Geological Survey)


THE OHIO OIL COMPANY
PLYMOUTH COLMAR POOL Twp 4N Rng 4 & 5W
McDonough & Hancock Counties State of ILLINOIS
Graph showing composite gross production curve for the "SOUTH & EAST POOL"
Thousand Barrels

Graph C—Composite gross production decl ine curve for the "South and East Pool"



Portrait of a
"MODERN"

IF this 6-inch elbow had been a flanged fitting assembly, it would have tipped the scale at 242 pounds instead of 27 pounds. Moreover it would have contained 53 pieces instead of just one Taylor Forge Seamless WeldELL.

If it had been a screwed fitting it would have been bulky and difficult to insulate. It would also have had interior shoulders which cause a flow resistance many times greater than the smooth-interior WeldELL. Worse still, on the order of 32% of the pipe wall would have been cut away by threading.

But the engineer was progressive. He chose the modern way: WeldELLS—for added strength and added safety with lighter weight — for smooth-flow interiors—for sightly, easily insulated exteriors — for total freedom from pipe maintenance — for a better job at actually lower cost. Portrait of a *"Modern"* is right!

Only Taylor Forge WeldELLS and other seamless steel welding fittings combine the six features illustrated here. The Taylor Forge line contains the widest range of types, sizes and thicknesses. Large stocks are carried by distributors serving every branch of the oil industry. Ask for WeldELLS.

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★WeldELLS
Seamless Pipe Fittings for Welding
★ Trade Mark Registered

pleted September 1, 1934, with a spudding machine and a motorized gasoline engine.

The casing used included 160¾ feet of 8¼-inch and 234 feet of 6¼-inch. Coring started at 483 feet 6 inches and finished up at 508 feet 4 inches with the Hoing sand at 489 feet 6 inches to 503 feet, or a total thickness of 13 feet 6 inches. The total depth was 508 feet 4 inches. The initial production was approximately 3 bbls. a day naturally. Air was later applied but it would not take any volume at a pressure of 60 pounds. The reason for this was that the fluid could not be displaced with such a low pressure. It was later shot and cleaned out with a production of 6 bbls. and at present is averaging between 2½ to 3 bbls. per day.

Due to improper handling of the core, a complete analysis could not be determined of the Hoing sand but it was of an immeasurable value due to the fact that certain assumptions were clarified. One such foundation was the proper place to set the finish string and certain markers for future drilling.

The principal reason for so much cleaning out was due to so many wells that had not been cleaned out before repressuring and were held in readiness for this in case repressuring worked successfully. When No. 31 McFadden was drilled and cored, it indicated that the open hole left by not setting enough finish pipe was the cause for a lot of clean ing out while the repressuring alone accounted for quite a few wells by causing the sand to disintegrate. It was the practice in both pools to set the finish string on top of the green shale, which has an estimated thickness of approximately 200 feet, to the top of the Niagara lime, the lime ranging in thickness from 20 to 45 feet to the top of the Hoing sand. Inversely the thickness of the Hoing sand varies according to the thickness of the lime. One of the latest wells drilled as an oil well, J. Jarvis No. 14, was cased with 35 feet of 10-inch, 201 feet of 8¼-inch, and 440 feet of 6⅝-inch, the 6-inch having been set on top of the sand.

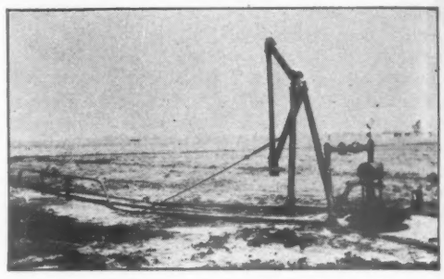
During the natural course of events some experiences were had with probable bypassing in certain areas and with some cut oil, but both were immediately taken care of by raising the fluid levels and using mechanical contraptions in the producing oil well. At the time of repressuring the east pool, there were some 25 wells that had been idle with the idea in mind that they could be used when some type of secondary method of recovery presented itself. After repressuring these wells were cleaned out and placed on the pump with the result that they made good producers. Some were considered dry holes and ready for abandonment, while there were some that made as high as 3 bbls. a day for some time but the average would be about a barrel to 1½ bbls. a day.

Vacuum was applied to the Hoing sand in the early part of 1926 and was started at the same time in both pools, the result being, as shown on the composite production curve for both pools (Graph C) that the production before the application of vacuum averaged approximately 4,000 bbls. per month for the period. After vacuum was applied, production averaged 6,400 bbls. for approximately eight years up to the time when repressuring operations began on the south pool, February 10, 1934. The east pool repressuring activities were started some few months later. The maximum peak reached 15,600 bbls. for the month of June, 1936.

Accounting cannot be made of all the various fluctuations occurring on the production graph before repressuring except that they constituted the general run of oil field interruptions. One main factor is the effect of extreme cold weather and the high water that is encountered each year.

Besides these normal production interruptions, repressuring operations began to show a much more abrupt change on the production curve due to the readjusting of the pumping cycle of all oil wells and the methods used in controlling the pressure and volume of key wells and the return volumes from the oil wells. From production graphs A and B it can be observed that the south pool gave more of a problem than the east pool. It should be kept in mind that the south pool does not have the same amount of area to be affected by repressuring.

The two repressuring plants have not been operating continuously throughout the entire period because we have experimented with different phases of operation such as a five-day week,



Key well installation

intermittent operation, short duration shutdowns such as a week, etc.

The conclusion reached was to use minimum volumes with a corresponding minimum pressure but with a steady flow of injection medium into the key wells, this being gradually increased to supply the demand. Both plants are running six days a week.

Since repressuring operations have proven successful in the east pool, there have been efforts to purchase the offset acreage to the original pool for edge oil production and likewise benefit by repressuring. The first to start this activity was Spence and others who leased the property on which the discovery well was drilled. Their first well was located southeast of the original location on the farm in the southeast corner of the SW quarter of the NW quarter of section 16, which came in for a small producer in December, 1935. At present there have been drilled nine oil wells with daily production of approximately 7 to 9 bbls. per day. The value of this reference is to show that after a lease has reached its economic limit and been abandoned there remains a certain percentage of recoverable oil in the reservoir. The depleted portion of the sand, when drilled, carried water which indicates that water must be the propelling energy. Other interests have drilled offset wells to the southwest edge of the pool but were not very aggressive in their efforts.

Due to forced offsets, it was necessary to drill No. 14 J. Jarvis, located 200 feet from the south line and 532 feet from the east line of the southeast corner of the lease in section 16. It is interesting to note that this well was drilled close to an abandoned oil well and had a production of 3 bbls. for the first 24 hours after the shot. The shot amounted to 40 quarts. The well was cored on August 5, 1937, from 456 feet 6 inches to 464 feet 6 inches with a total depth of 468 feet. The Illinois State Geological Survey made porosity and permeability tests of the above core, the results of which are being prepared for publication.

With the future outlook on repressuring operations in this field a potential reserve is obvious by the fact that there are several locations to be drilled which would stimulate or increase our per acre yield.

In conclusion I might add that this repressuring project has been very interesting and is the writer's conception of what an oil field should be like in order to repressure it successfully.

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1. Hinds, Henry, Oil and Gas in Colchester and Macomb Quadrangles: Illinois State Geological Survey Bulletin 23, pp. 45-50, 1917.
2. Kay, Fred H., Oil Statistics 1914-15: Illinois State Geological Survey Bulletin 33, 1916.
3. Workman, L. E., The Stratigraphic Position of the Hoing Sand: Trans. Illinois State Academy Science, Vol. 26, No. 3, p. 107, 1934.

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph. D., Technical Editor

Calcium Carbide for Desulfurizing Petroleum Oils

Can you enlighten us with the details of a process which makes use of calcium carbide for removing sulfur from petroleum oils? The process appears to have originated in England.—E. G. T.

The details of the carbide process for desulfurization of petroleum oils are not available. Kalichevsky and Stagner mention the Blackmore patents, which include British 19,744, September 13, 1904, and United States 793,026, January 20, 1905, and 509,086, January 2, 1906.

Oil vapors are passed through granular calcium carbide to produce acetylene, ethylene and calcium sulfide, according to—

$$C_2H_5SH + CaC_2 = C_2H_2 + C_2H_4 + CaS$$

The well-known reaction—

$$CaC_2 + 2H_2O = Ca(OH)_2 + C_2H_2$$

is suggested for the removal of small quantities of water.

Reference: Kalichevsky and Stagner, Chemical Refining of Petroleum, page 265.

Specifications For Turbine Oil

What are the specifications for a good oil for lubricating dynamos and turbines?—S. D. F.

The Federal specification for turbine, dynamo and high speed steam-engine oil, which covers five grades, designated Nos. 8, 10, 20, 25 and 30, ranging from 70 to 205 Saybolt viscosity at 130° F. should answer the purpose.

FEDERAL STANDARD TURBINE OILS

Test—	Grade 5	10	20	25	30
Vis. S.U. @ 130° F. sec.	70-90	90-120	120-145	145-185	185-205
Flashpoint °F. min.	315	325	340	350	350
Color A.S.T.M. No. max.	4	4	5	5	5
Carbon res. % max.	0.1	0.2	0.3	0.4	0.4
Steam emul. No. max.	120	150	180	180	210

Pourpoint max. °F. for all grades is 35; neutralization number max. is 0.1 for all; corrosion is negative. These oils should be pure petroleum oils.

Reference: Federal Standard Stock Catalog. Sec. IV, VV-0-661.

Petroleum Gases Applied For Heat Treatment of Metals

Could you furnish information covering the nature of the special petroleum gases now used for heat-treating of metals?—E. T.

Heat treating of metals, especially steels and steel alloys, is a subject embracing so much chemistry that nothing more than a very brief reference to the principles can be given here. Steel may be subjected to special heat treatment for two purposes. That of minor importance, is to give the metal a color, which is a surface reaction and usually applied to the finished article. The most important type of treatment causes an actual chemical change within the metal, which often extends an appreciable distance beneath the surface. The elements in a gas that receive most consideration are carbon and sulfur, for these have a great influence on the physical properties of the finished steel.

Simple surface treatment should have no, or very little, chemical action. A pure charcoal gas is commonly used for bright annealing. The liquefied hydrocarbon gases, such as propane and butane, or mixtures of the two, are very pure, so are being utilized in large quantities for this purpose. These gases contain no hydrogen sulfide, in fact are practically free from sulfur in any form, and with the carbon and hydrogen so balanced that there is very little if any tendency to form products, under the conditions of use, that will act to alter the composition of the metal.

Flue gases, water-gas and other manufactured gases are applied in heat treating. However, these are often objectionable because of composition. Sulfur is always present, which readily combines with the metal to do harm. The carbon available in most of these gases tends to carburize, but in some, especially those made from coal and coke, in which carbon is present in several forms, there may be some action resulting in reducing the carbon content of high-carbon steels. The balance between carbon monoxide and dioxide present in the furnace gas is always important. When carbon monoxide is in excess there is a tendency to carburize the steel but if the carbon dioxide predominates carbon is withdrawn from the steel.

Conway reports the gas in the furnace, when propane is the fuel, to contain 13 per cent carbon monoxide and 5.5 per cent carbon dioxide. This composition would have a tendency to carburize, or harden the metal. The first and most important consideration is the heating value, which for propane is 2,500 B.t.u. per cubic foot.

References: Slawter and Ganser, Experimental Study of Gases for Controlled Atmospheres in the Heat Treatment of Steels, Metals and Alloys, 8, 159, 1937. J. Conway, Iron Age, July 23, 1926, page 30.

CHEMICALS FOR THE PETROLEUM INDUSTRY

Ammonia Aqua

(Ammonium hydroxide)

Use—Neutralizing and treating. Prevention of corrosion in towers, etc., by hydrochloric acid.

Form—Clear liquid, pungent odor.

Formula—NH_4OH.

Molecular weight—35.

Specific gravity—Varies with solutions.

LIMITATIONS

Aqua ammonia may be obtained in various concentrations, the most important grades are 16, 18, 20, and 26° Be. water solutions. These solutions should be free from color and sediment.

Note: For anhydrous ammonia, see August 19, 1937, issue.

Source of Benzol and Process For Its Purification

Will you oblige us with a description of the process for extracting benzol from coal, the nature of its composition and the process used for refining it?—D. V. N.

Crude benzol is obtained from the distillation of coal tar, being a constituent of the first fraction which is known as crude naphtha or light oil. It constitutes only approximately 5 per cent of the tar. The grade known as motor benzol yields 90 per cent by distillation between 176° and 212° F. The composition of crude benzol is related to the sort of coal charged and the type of retort used for the carbonization or coke-forming operation. The tar is a by-product in the manufacture of coke.

There are three kinds of retorts: Vertical, operating at relatively low temperatures; the horizontal using the higher temperatures and the inclined retorts a medium temperature. The composition of the crude benzol obtained is indicated in the table:

CRUDE BENZOL BY RETORT SYSTEM

	Retorts Horizontal	Inclined	Vertical
Specific gravity	0.896	0.875	0.860
	Volume Per Cent		
Paraffins	1.3	5.3	12.6
Benzol	50.3	32.5	26.7
Toluol	16.4	18.0	11.5
Xylol	8.0	13.8	20.1
Unsaturates	5.6	12.7	11.0
Wash oil	17.7	17.7	17.7

Benzols may contain other substances, including phenols, pyridine, aniline, hydrocyanic acid and sulfur in the form of carbon disulfide and thiophene.

The method for refining benzol is similar to the treatment applied for the purification of cracked gasoline and kerosene. The crude product is first washed with a moderately strong, 10° to 18° Be., solution of caustic soda for the purpose of removing phenols and sulfides. After settling the sludge is drawn off, then the liquid is washed with water and again settled. The next step is to treat with sulfuric acid of about 32-38° Be. gravity, to remove pyridine, tar, etc., settle and draw off the sludge. The product is usually finished with weak alkaline and water washes. The treated liquid is then distilled to be separated into fractions, benzol and solvent naphtha. Nash and Howes state:

"In England, the treatment of benzols with concentrated sulfuric acid is almost without exception a batch process, carried out in so called 'benzol washers,' i.e., agitators. The quantity of concentrated acid used in the refining processes naturally varies between fairly wide limits, but is often about 2 per cent by volume of 87-95 per cent acid. This quantity may be as much as 4 per cent, but rarely exceeds this figure. After acid treatment, the benzol is washed with about 1 per cent of 7 to 10 per cent caustic soda solution to effect neutralization and is then distilled.

"The losses incurred in this treatment vary from 3 to 10 per cent by volume and are usually about 7 per cent. Of this loss, about 1 to 5 per cent is incurred in redistillation and is partly accounted for by polymerization."

Reference: Whitehead, Benzol, page 8. Nash and Howes, Principles of Motor Fuel Preparation and Application, I, 287, etc.

Come on, you!
BEAT
Conoco's World-Record
Well - 15,004 ft.
IT CAN
BE DONE
using CONOCO
SPECIALIZED OIL-FIELD
lubricants
Continental
Oil Co.

PROBLEMS FROM READERS

Edited by L. G. E. Bignell

New Geophysical Prospecting Methods Outlined

Can you give me any information on the following subjects: Eltran—an electrical method of geophysical prospecting and soil analysis for hydrocarbon content as described in brief by Dr. E. E. Rosaire at the New Orleans meeting of the A.A.P.G.—J. E. O.

Eltran is a trade name for "electric transients." This method contemplates passing a suddenly applied electric current through the earth by means of spaced electrodes. The form of the potential transient as it appears outside the current electrodes is studied. As the potential transient is extremely rapid a refined method of recording is necessary. Means have been developed for measuring the relative times of the transient potentials received from different points.

The above has been taken from the abstract of a paper by Louis Statham on "Electric Earth Transients in Geophysical Prospecting" published in the June 1936 issue of Geophysics. It is difficult to state basic facts regarding this method in simpler language but "transient electric field" is explained as follows:

"When a source of direct current is suddenly applied between two electrodes in the earth, a transient electric field is produced. In the steady state, the electric field becomes the gradient of the electric potential. In the transient state, however, the potential field is not defined, but we may measure the total electric field between two points by means of electrodes, which may be designated as the potential electrodes although it is understood that the difference of potential thus measured is not to be confused with the potential field."

The word "transient" is used in this instance to indicate an electric current which flows quickly between two electrodes spaced several thousand feet apart. The passage of this transient electric field is observed by means of another pair of electrodes placed approximately in the same straight line but outside of the pair of current electrodes. Other apparatus is used to record the passage of these electric currents and an image is produced upon a fluorescent screen and photographed with an ordinary camera. The film is calibrated so that the time required for the transient current to pass between the two electrodes can be measured.

To actually make field application of these several relatively simple procedures to geophysical prospecting has required the development of a technique which is described in Mr. Statham's paper in some detail and the reader is referred to that paper. To interpret the data secured by the use of these instruments it is necessary to give consideration to other geological features. The current flows through the soil near the surface when the switches are first closed but will penetrate deeper if the current is allowed to flow longer and the form of transients considered are only those secured after a reasonable time has elapsed and in this way it is possible to distinguish changes between surface conditions and deeper structures.

Soil analysis to determine hydrocarbon contents is not new. In Russia it has been perfected as a laboratory procedure for some time and is regularly used as one of the tools available to the geologist. It has been demonstrated that hydrocarbons have accumulated in the soil above buried gas and oil fields. Concentration of these hydrocarbons, expressed principally as methane and ethane contents, will vary across the area over the underground reservoirs and by interpretation of the laboratory work it has been possible to outline oil fields quite accurately.

Through the use of the Eltran electric method of geophysical exploration and checking the area by analysis of soil samples for hydrocarbon contents it is possible to find new pools, to discover oil left in portions of old fields and to outline recently discovered oil fields in some detail.

This explanation is not intended to describe in detail these methods because their application is too technical to discuss in a letter but considerable has been written on these subjects and they are not new to the geologist and geophysicist. Until recently the industry has not been ready to accept new ideas about prospecting for oil fields but the time has arrived when these new methods will be applied and as a result many new oil fields will be found and reserves built up.

Rate of Discharge of Tank

What is the rate at which an 80,000-bbl. steel tank containing 41 feet of 38-gravity oil will empty itself through a full open 8-inch gate. The temperature being about 60° F. and the flow being unassisted by any artificial means. A short 6-inch nipple is all the pipe line involved beyond the gate.—P. F. D.

The following formula will apply to the problem set forth in your letter concerning the rate of emptying an 80,000-bbl. tank through a 6-inch short nipple:

$$t = \frac{2\ A\ (\sqrt{h} - \sqrt{H_2})}{ca\ \sqrt{2g}}$$

In which:

t = time in seconds.

A = area of upper surface of vessel in square feet.

c = coefficient of discharge.

a = area of flow nipple in square feet.

g = 32.2.

h = initial head of fluid in feet.

h_2 = final head of fluid in feet.

The exact diameter of the tank is not known but an 80,000-bbl. tank of oil 41 feet deep will require a tank 118 feet in diameter to hold it.

Therefore:

A = 10,936 square feet.

c = .82 (velocity × area).

a = .1963 square foot.

$2g = 64.4 \sqrt{\ } 64.4 = 8.02$.

$h = \sqrt{41}$ feet = 6.4.

h_2 = 0 feet.

Substituting we have:

$$\frac{2 \times 10936 \times 6.4}{.82 \times .1963 \times 8.02} = 108{,}500$$ seconds or 30 hours for water.

Thirty-eight degree gravity oil has a specific gravity of .8348, therefore if we divide 30 hours by .8348 the result is 36 hours, or the approximate time required to empty this tank of oil under the conditions outlined.

Because of the fact the discharge nipple is short the viscosity of the oil is negligible and disregarded in this case and the coefficient of discharge is the result obtained by multiplying the coefficient of velocity by the coefficient of area which in this case gives a coefficient of .82 which is used in estimating the effective orifice. We have checked this average rate of discharge or 2,220 bbls. per hour with known rate of flow of oil in the Seminole district to a pipe line with an 8-inch gate wide open and these results check closely.

Why Is Standard Barrel of Oil 42 Gallons?

Can you explain why 42 gallons is the standard measure for a barrel of oil? How did this custom become established?—C. B. M.

During the early days of the oil industry in this country practically all crude oil was handled in wooden casks or barrels. The demand was so great that manufacturers furnished barrels ranging in capacity from 40 to 55 gallons. This led to a lot of confusion and in 1866 the standard of 42 gallons was generally adopted. This came about because the 40-gallon barrel had become most popular but it was usual practice to add about 5 per cent or 2 gallons for tare or estimated loss during handling.

What Is Serpentine?

We are interested to learn about serpentine formations and will appreciate any information you can furnish.—A. F. P.

In his handbook, "Identification of Geological Formations," the late Dr. J. A. Udden, of the Bureau of Economic Geology and Technology, of Texas, states that serpentine is a silicate of magnesia and iron containing moisture. It has an oil green color and a hardness varying from below to above that of limestone. Chlorite is closely related to serpentine but contains more iron and alumina. These minerals are the hydrated decomposition products of such minerals as augite and hornblende. They constitute the principal oil-bearing rock in the Thrall and Lytton Springs and several other oil fields of Texas and are known to occur as altered intrusives at points along the Balcones Escarpment and in the Trans-Pecos country.

Sucker-Rod Loads

Sucker-rod load determinations involve two factors: (1) The dead load of sucker-rods and fluid. (2) The impulse load, to be overcome in accelerating the rods and fluid during upstrokes.

The peak impulse polish rod load may be calculated from the formula suggested by J. C. Slonneger, Falk Corp., Tulsa:

$$P = (W_o + W_r) \times \left(1 + \frac{SN}{5400}\right)$$

Where:

P = Peak polished rod load—pounds.

W_o = Weight of fluid—pounds = 0.34 D^2L.

W_r = Weight of rods—pounds.

S = Polish rod strokes—inches.

N = Number of strokes per minute.

D = Effective diameter of plunger in inches.

L = Depth of pump in feet.

This formula has been found to be approximately correct the results of actual field weight measurement tests.

Mid-Continent Refinery Runs Raised by 17,500 Barrels Daily in July

By D. H. STORMONT

Refiners in the Mid-Continent during July are increasing their crude runs to stills by a total of 17,515 bbls. daily, according to estimates made at the first of July, the total for the area being 557,520 bbls. daily. This month's estimates, based largely on information supplied by the individual refining companies as to the amount of crude they plan to process during the month, is more than 50,000 bbls. below the total for the area in July, 1937. Thus the comparatively slight increase in runs should have but little effect on the present downward trend in stocks of gasoline in the Mid-Continent.

The increase in runs was due largely to higher refining activity in Oklahoma and Kansas, as most of the districts show but little change from June totals and two show decreases of over 1,000 bbls. In Oklahoma a large portion of the increase was due to the resumption of operations in two plants, those of the Cities Service Oil Co. at Okmulgee and Eason Oil Co. at Enid. Cities Service will run 2,600 bbls. daily at Okmulgee and Eason reported estimated runs of 2,000 bbls. daily at its plant. The remainder of the state's increase was accounted for by slightly higher runs at several refineries.

East Texas Runs Higher

In East Texas daily refinery runs are being held at approximately the same levels as in June, the total for the area being increased by over 2,000 bbls. daily. Thirteen plants were in operation in the East Texas field proper on the first of the month. Beacon Oil & Refining Co.'s Henderson plant and Utah Refining Co.'s Kilgore plant, both of which were in operation last month, were shut down on June 1. Their shutting down, however, was offset by the reopening of Tower Refining Co.'s plant and the Texas Oil Products Co.'s plant, the latter formerly operated by Martin Refining Co. According to railroad commission records, two refineries are operating on injunction oils upon which the commission has not issued tenders, two on oil imported from Louisiana and the remainder on East Texas pit oil and fresh crude. Latest commission reports show that 22 per cent of charging stock to East Texas refineries is either out-of-state oil or pit oil, and that only about 5½ per cent of the field's production is processed in East Texas plants.

Kansas refiners during July are increasing their crude runs by about 8,500 bbls. daily to a total of 131,850 bbls. daily, or some 14,000 bbls. less than runs of a year ago. The increase in runs was accounted for largely by higher schedules at plants of El Dorado Refining Co., Globe Oil & Refining Co. and at several of the other larger refineries. United Refining Co.'s plant at Russell, which was shut down for a short time, has been reopened and is processing some 800 bbls daily.

A decrease of 1,830 bbls. daily is shown for the North Louisiana district, caused mainly by substantial reductions at plants of the Arkansas Fuel Oil Co. and Stanolind Oil & Gas Co. The remainder of the plants in that area showed no change in their daily runs.

New Southwest Texas Plant

One new plant was added to this list this month, that of Dale Refining Co. at Dale, Tex., in the Southwest Texas district. The plant is of 500 bbls. daily capacity and is processing some 300 bbls. of crude daily from the Buchanan field and northern Caldwell County area. R. Ranne of San Antonio is president of the company and Fred Tolleson, sales manager. Daily runs to stills for this area totaled 17,550 bbls. for July, or a gain of 1,240 bbls. as compared with June.

The North Central and West Texas districts both show decreases of about 1,700 bbls. for this month, runs in the two areas totaling 37,730 bbls. and 78,250 bbls., respectively. Two new plants were reported closed down in these districts this month, those of Tydal Refining Co. at Gainesville and Concho Refining Co. at San Angelo.

Mid-Continent Crude Runs

Average Daily (Barrels)
(Advance estimate compiled by The Oil and Gas Journal)

	1936	1937	1938
January	501,600	531,535	529,710
February	519,960	541,790	507,985
March	478,760	533,875	491,935
April	506,775	558,385	532,120
May	513,510	572,855	527,315
June	527,225	593,625	540,005
July	539,370	605,640	557,520
August	557,650	624,475	
September	553,215	625,485	
October	536,330	619,210	
November	548,015	592,170	
December	535,500	544,040	

Operations by Refinery Districts
Daily crude runs

	July	June	Incr.
Arkansas	26,650	26,300	350
East Texas	56,650	54,640	2,010
Kansas	131,850	123,400	8,450
N. Central Texas	38,830	38,775	55
North Louisiana	45,500	47,330	*1,830
Oklahoma	162,240	153,300	8,940
Southwest Texas	17,550	16,310	1,240
W. Texas Panhandle	78,250	79,950	*1,700
Total	557,520	540,005	17,515

*Decrease.

Estimated Daily Average Mid-Continent Refinery Crude Runs for July

ARKANSAS

Company and location—	Daily capacity	Av. dly. runs July	Av. dly. runs June
Berry Asphalt Co., Waterloo	2,000	1,200	1,200
Henry H. Cross, Smackover	6,000	3,000	3,000
Lion Oil Ref. Co., El Dorado	17,000	13,500	13,500
Macmillan Pet. Corp., Norphlet	2,500	2,000	2,000
Root Pet. Co., El Dorado	10,000	6,450	6,000
Stephens Ref. Co., Stephens	700	500	600
Total	38,200	26,650	26,300

KANSAS

Company and location—	Daily capacity	Av. dly. runs July	Av. dly. runs June
Barnsdall Ref. Co., Wichita	5,000	5,000	5,000
Bay Pet. Co., McPherson	3,500	3,000	3,000
Chanute Ref. Co., Chanute	1,000	1,000	700
Chase Ref. Co., Chase	800	(*)	(*)
Derby Oil Co., Wichita	8,000	7,000	6,000
El Dorado Ref. Co., Eldorado	6,000	4,500	4,000
Falcon Ref. Co., Inc., Great Bend	1,000	850	500
Globe Oil & Ref. Co., McPherson	13,000	13,500	13,000
Kanotex Ref. Co., Arkansas City	12,000	7,500	6,000
National Ref. Co., Coffeyville	8,000	5,000	4,500
Pet. Products Co., Chanute	1,250	1,000	1,000
Phillips Pet. Co., Kansas City	23,000	17,100	17,500
Roper Pet. Co., Parsons	400	300	300
Shallow Water Ref. Co., Scott City	2,500	1,500	1,000
Shell Petroleum Corp., Arkansas City	20,000	(*)	(*)
Sinclair Ref. Co., Coffeyville	12,000	8,200	7,200
Sinclair Ref. Co., Argentine	11,000	8,200	7,700
Skelly Oil Co., Eldorado	23,000	19,500	18,500
Socony-Vacuum Oil Co., Inc., Augusta	20,000	16,500	16,500
Standard Oil Co. (Indiana), Neodesha	7,500	7,400	6,900
United Ref. Co., Russell	1,200	800	700
Vickers Pet. Co., Potwin	4,000	4,000	3,500
Total	184,150	131,850	123,400

*Shut down.

EAST TEXAS

Company and location—	Daily capacity	Av. dly. runs July	Av. dly. runs June
Beacon Oil & Ref. Co., Henderson	4,500	(*)	200
Cascade Ref. Co., Reed Switch	3,000	2,000	2,000
Clay Ref. Co., Arp.	3,500	2,100	2,300
Danciger Refs., Inc., Longview	6,000	5,000	4,500
East Texas Ref. Co., Longview	10,000	6,600	6,660
Hurricane Pet. Corp., Overton	5,000	2,850	4,000
Hurricane Pet. Corp., Arp.	3,300	2,800	2,850
Lacy Ref. Co., Kilgore	3,000	2,500	2,500
Magnolia Pet. Co., Corsicana	5,000	5,400	4,030
McMurrey Pet. Corp., Tyler	10,000	(*)	(*)
Premier Oil Ref. of Texas, Willow Springs	4,000	3,000	2,900
Paluxy Asphalt Co., Talco	5,000	3,000	2,800
Sinclair Ref. Co., Camp Switch	4,000	4,000	2,200
Solvex Refs., Inc., Gladewater	4,500	(*)	(*)
Southport Pet. Co., Kilgore	4,000	2,700	3,000
Talco Asphalt & Ref. Co., Mt. Pleasant	7,000	4,500	5,000
Texas Co., The, Dallas	16,000	8,500	8,000
Texas Oil Products Co., Gladewater	3,000	1,200	(*)
Tower Ref. Co., Overton	3,500	500	(*)
Utah Ref. Co., Kilgore	2,000	(*)	1,700
Total	105,300	56,650	54,640

*Shut down.

NORTH CENTRAL TEXAS

Company and location—	Daily capacity	Av. dly. runs July	Av. dly. runs June
Baird Ref. Co., Baird	1,500	1,300	1,300
Bryson Pipe Line & Ref. Co., Bryson	2,000	1,500	1,200
Coleman Ref. Co., Coleman	700	400	170
Continental Oil Co., Wichita Falls	6,000	4,500	4,500
Denver Prod. & Ref. Co., Gainesville	3,000	1,500	1,000
Exchange Pet. Corp., Albany	800	(*)	(*)
Falls Ref. Co., Wichita Falls	2,500	500	500
Graham Ref. Co., Graham	500	200	200
Gratex Ref. & Fuel Oil Co., Graham	500	285	300
Gulf Oil Corp., Fort Worth	8,000	7,000	7,000
Hightower Oil & Ref. Corp., Brownwood	750	200	100
Jacksboro Ref. Co., Jacksboro	400	175	100
La Salle Pet. Co., Burkburnett	3,000	650	650
Magnolia Pet. Co., Fort Worth	7,500	5,700	4,075
Midway Ref. Co., Goldsboro	300	100	100
North Texas Ref. Co., Gainesville	600	300	300
Ohio Oil Co., Fort Worth	5,000	3,900	4,300
Olney Oil & Ref. Co., North Olney	3,500	2,000	500

Company and location—	Daily capacity	Av. dly. runs— July	June
Panhandle Ref. Co., Wichita Falls	4,200	3,000	3,000
Panhandle Ref. Co., Luedders	1,500	1,000	1,000
Southland Ref. Co., Olney	500	100	50
Taylor Ref. Co., Taylor	1,000	750	750
Texas Pacific Coal & Oil Co., Caddo	800	600	600
Tucker Oil Co., Burkburnett	400	170	180
Tydal Ref. Co., Gainesville	1,850	(*)	1,100
Wagoner Ref. Co., Electra	4,000	3,000	3,000
Total	62,800	38,830	38,775

*Shut down.

NORTH LOUISIANA

Arkansas Fuel Oil Co., Bossier City	25,000	19,000	20,000
Atlas Pipe Line Co., Shreveport	12,500	9,000	9,000
Bayou State Oil Corp., Hosston	750	500	500
East Texas Ref. Co., Sandra	7,000	3,300	3,330
Premier Oil Ref. Co. of Texas, Cotton Valley	3,000	2,500	2,500
Rodessa Oil & Ref. Corp., Cedar Grove	12,000	10,000	10,000
Stanolind Oil & Gas Co., Superior	5,000	1,200	2,000
Total	62,250	45,500	47,330

OKLAHOMA

Anderson-Prichard Ref. Corp., Cyril	7,500	6,000	6,000
Barnsdall Ref. Co., Barnsdall	5,000	4,000	4,000
Barnsdall Ref. Co., Okmulgee	7,500	(*)	(*)
Bell Oil & Gas Co., Grandfield	5,000	3,000	3,000
Black Gold Ref. Co., Oklahoma City	2,500	(*)	(*)
Champlin Ref. Co., Enid	16,000	12,000	12,000
Cities Service Oil Co., Okmulgee	4,000	2,600	(*)
Cities Service Oil Co., Ponca City	12,000	9,670	9,000
Continental Oil Co., Ponca City	28,000	26,000	26,600
Cosco Oil Co., Wynnewood	3,000	2,500	1,600
Cushing Ref. & Gasoline Co., Blackwell	1,700	(*)	(*)
Cushing Ref. & Gasoline Co., Cushing	4,200	3,500	3,500
Deep Rock Oil Corp., Cushing	10,000	9,000	9,000
Eason Oil Co., Enid	3,000	2,000	(*)
Globe Oil & Ref. Co., Blackwell	8,000	(*)	(*)
Johnson Oil Ref. Co., Cleveland	6,000	4,000	4,000
Knox Ref. Co., Covington	300	100	100
Mid-Continent Pet. Corp., West Tulsa	35,000	20,500	18,600
Ohio Oil Co., Bristow	5,000	2,780	3,000
Omar Ref. Co., Garber	5,000	3,000	3,000
Peppers Gasoline Co., Oklahoma City	500	400	400
Phillips Pet. Co., Okmulgee	6,500	5,500	5,500
Pure Oil Co., Muskogee	9,000	6,000	5,500
Rock Island Ref. Co., Beckett	6,500	5,000	5,000
Sinclair Ref. Co., Sand Springs	6,000	4,100	4,000
Sun Oil Co., Yale	5,000	2,000	2,000
Sunray Oil Co., Allen	7,000	3,570	3,500
Texas Co., West Tulsa	16,000	10,320	9,500
Tide Water Oil Co., Drumright	12,000	12,000	11,500
Wilcox Oil & Gas Co., Bristow	6,000	2,700	3,000
Total	241,200	162,240	153,300

*Shut down.

SOUTHWEST TEXAS

Carle Ref. Co., Inc., San Antonio	1,000	(*)	(*)
Dale Ref. Co., Dale	500	300	(†)
Eggleston Oil Products Co., Three Rivers	1,800	800	800
Humble Oil & Ref. Co., San Antonio	5,000	3,500	3,100
Ina Oil & Ref. Co., Hondo	400	(*)	(*)
Magnolia Pet. Co., Luling	8,000	6,500	5,960
Misko Refineries, Inc., Mirando City	4,500	(*)	(*)
Pettus Oil & Ref. Co., Pettus	1,000	800	800
Phoenix Ref. Co., San Antonio	1,200	700	700
Phoenix Ref. Co., Pettus	900	500	500
Pioneer Oil & Ref. Co., Somerset	2,000	750	750
Rado Ref. & Prod. Co., McAllen	800	700	700
Texas Co., San Antonio	5,000	2,600	2,600
White Wing Ref. Co., Sullivan City	1,000	400	400
Total	33,100	17,550	16,310

*Shut down. †Building.

WEST TEXAS AND PANHANDLE

Aero Gas & Ref. Co., Fort Stockton	350	100	100
Coltex Ref. Co., Colorado	12,500	8,000	8,000
Concho Ref. Co., San Angelo	250	(*)	100
Cosden Oil Co., Big Spring	15,000	9,500	9,000
Danciger Refs., Inc., Pampa	6,500	5,000	5,500
Danube Oil Corp., Borger	1,200	1,000	1,000
Farmers Ref., The, Lubbock	500	200	200
Gulf Oil Corp., Sweetwater	7,000	4,900	6,100
Howard County Ref. Co., Big Spring	2,000	1,100	1,000
Moutray Oil Co., Hawley	1,400	500	800
Onyx Ref. Corp., Hawley	3,000	1,700	1,500
Panhandle Ref. Co., Kings Mill	2,500	1,850	1,800
Payward Ref. Co., Shamrock	600	600	600
Phillips Pet. Co., Borger	35,000	24,510	25,000
Post Refining Co., Rotan	800	800	600
Shamrock Oil & Gas Corp., Sunray	3,000	2,000	1,800
Shamrock Oil & Gas Corp., Lefors	1,600	1,200	1,200
Standard Oil Co. of Texas, El Paso	14,000	8,490	8,400
Stamford Ref. Co., Stamford	450	450	400
Star Light Ref. Co., Ballinger	1,000	150	150
Texas Co., El Paso	2,000	1,300	1,300
Texas Co., Amarillo	6,000	3,000	3,500
West Texas Ref. Co., Pecos	500	(*)	(*)
Western Ref. Co., Fort Stockton	1,000	100	100
Wickett Pet. Co., Wickett	3,500	1,800	1,800
Total	122,050	78,250	79,930

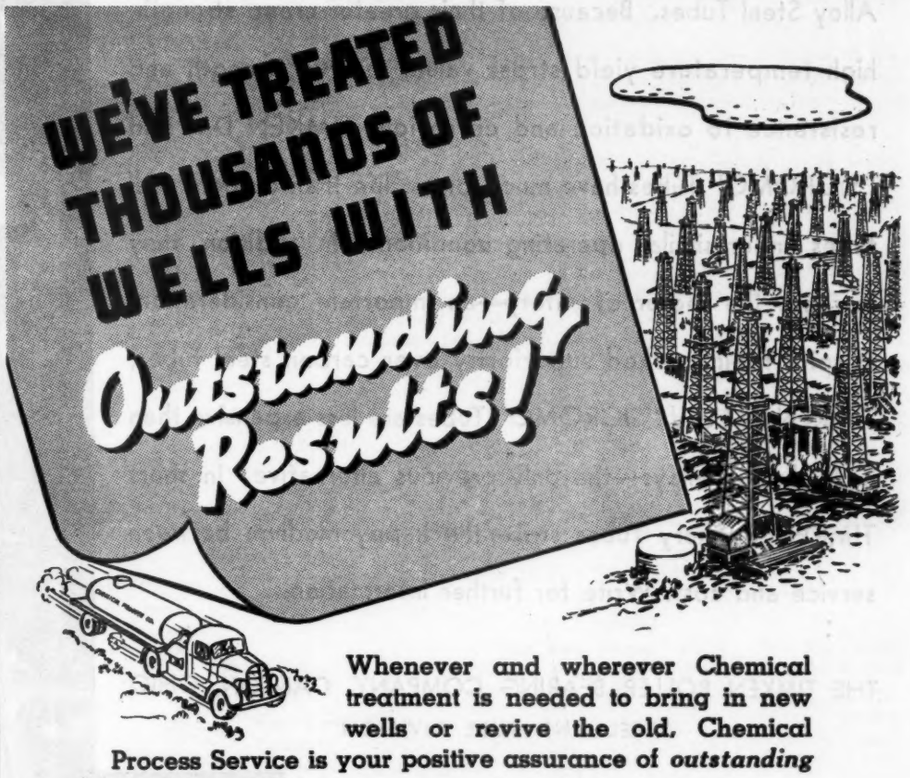
Turner Valley Asks Freight Cut On Oil to Ontario Refineries

Negotiations are continuing between representatives of Turner Valley producers and the transcontinental railroads for a reduction in the freight rates on Turner Valley crude to permit its delivery on an economic basis to refineries in Ontario and Quebec. The present rate, Calgary to Fort William, is around $2.40 a barrel, and a figure below $1.50 is suggested. Producers claim the rate, Calgary to Sarnia, must be less than $1 per barrel in order to permit economic production.

It is estimated that to compete with Mid-Continent crude, the Turner Valley product must be delivered to the refiner at a cost of $2.02 per barrel. The present cost is estimated around $3.92, made up of field price, $1.25; handling, storage and pipe line charges to Calgary, 20 cents; freight rate, Calgary to Fort William $2.40; water shipment, Fort William to Sarnia, approximately 7 cents.

Both Imperial Oil, Ltd., and British American Oil Co. have indicated willingness to take trial shipments at their Sarnia and Toronto refineries, to assist in determining the possibilities of commercial utilization. The railways are understood to demand a guarantee of traffic volume by the refiners before a permanent rate is fixed. A possible subvention by the federal government has been suggested to assist in the early stages of marketing.

Representatives of United States and British steel firms have been investigating the possibilities of providing a pipe line outlet for the Turner Valley product.



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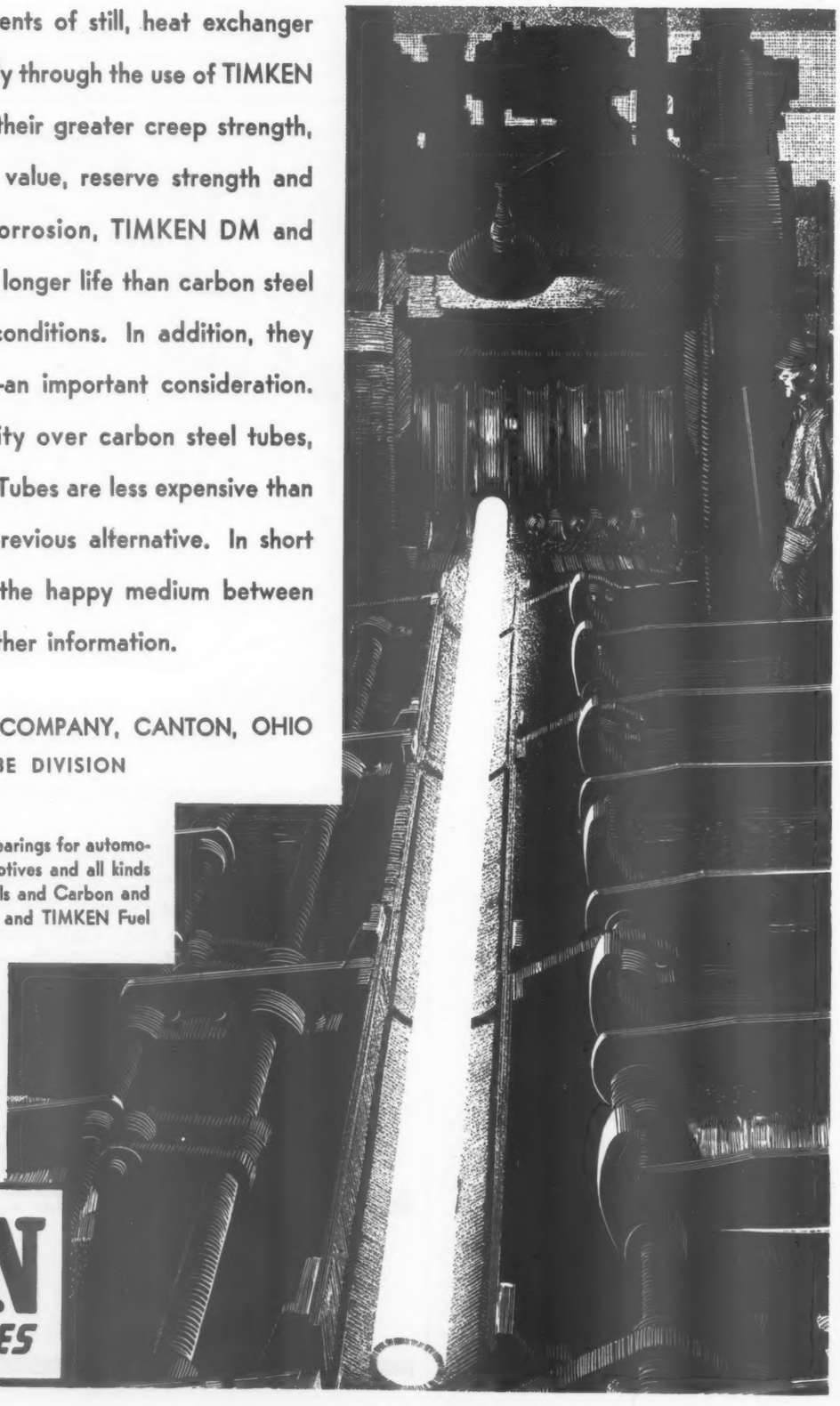

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FIELD OPERATIONS

Summarizing the Week's Developments

KANSAS—Potential of all Kansas wells at the end of June was 3,349,528 bbls. daily, highest rating in the history of the state. A new oil pool was opened 7 miles northeast of Wichita. The Lyons gas pool, Rice County, was extended 1½ miles southward. One-half mile extension of the Brandt pool, Butler County, to the southeast was indicated, and a wildcat 1½ miles north of Brandt was showing as a probable producer. A wildcat in section 31-32-2e, Sumner County, was showing oil.

OKLAHOMA—The second gas pool to be found in southern Oklahoma in recent weeks was uncovered in section 22-1n-1e, Garvin County; the other discovery, completed in May, was in section 8-1n-2e, Murray County. Three wells offsetting the Wilcox sand discovery well in section 16-28-1w, Kay County, have been started. The discovery well flowed about 350 bbls. of high gravity oil in four hours.

TEXAS—A deep oil pool close to the city limits of Wichita Falls, in Wichita County, was opened by a well estimated to be good for 500 to 1,000 bbls. per day from the deep Marble Falls formation of the Bend series, and a new Canyon lime pool, 1 mile north of Holiday in the same county, is a probability. The test flowed 70 bbls. of oil in 30 minutes. Aside from small extensions the coastal area in Texas had an uneventful week. A number of important wildcats were started. In Southwest Texas drill stem tests of important outposts continue without definite results although one test north of the South Alice pool in Jim Wells County looked discouraging. The North Agua Dulce pool in Nueces County was extended a half mile east. Southern Andrews County's recent pool opener, Rhodes & Thompkins No. 1 E. Cowden, flowed 1,600 bbls. of oil after an acid treatment. A new Caddo lime pool was opened in Young County, the discovery well starting at 1,000 bbls. per day.

LA-ARK-TEX—A wildcat in the Cotton Valley area, North Louisiana, flowing 50 bbls. per hour from the "D" sand, just above the Bodcaw, was an interesting event. A number of Bodcaw sand wells were completed in Cotton Valley. Standard Oil Co. of Louisiana posted crude oil prices in the three Columbia County, Arkansas, pools and the pools are expected to be given an outlet soon.

MICHIGAN—A wildcat in Clare County came in with a production of 500 bbls. daily, giving a northwestward extension to eastern Michigan's oil region. The well is over 25 miles from the nearest production and is producing from the Dundee-Monroe formation topped at 3,991 feet.

ILLINOIS—The new Benoist sand pool opened in section 5-1n-2e, east of Centralia, by the Texas Co. with a well good for 732 bbls. in 23 hours, and a 1,500-bbl. well in the Olney pool in Richland were features among the 44 completions of the week in the state.

KENTUCKY—The Birk City pool, opened close to the Green River in Henderson County, jumped across the river into Daviess County, the first well in that part of the field starting at 165 bbls. per day from the McClosky lime. Three wells were completed on the Henderson County side averaging about 500 bbls. per well.

Completions in All Fields

(Week Ending July 9, 1938)

	Oil	Gas	Dry	Total	1938 total comp. to date	1937 total comp. to date
N. Y., Pa. and W. Va.	47	12	5	64	2,052	2,230
Ohio	8	7	4	19	488	585
Indiana	0	0	0	0	42	49
Kentucky	14	2	4	20	425	286
Illinois	37	1	6	44	598	41
Michigan	8	0	3	11	421	440
Kansas	12	0	8	20	889	1,260
Oklahoma	15	3	11	29	929	1,501
Texas:						
North Central Texas	32	0	28	60	1,644	1,509
West Texas	28	0	2	30	1,173	1,378
Texas Panhandle	5	1	0	6	325	370
East Texas	29	0	1	30	1,135	1,136
East Central Texas	2	0	5	7	190	371
East Texas Border	2	0	0	2	85	218
Gulf Coast Texas	31	0	4	35	684	774
Southwest Texas	27	5	19	51	1,129	1,726
Total Texas	156	6	59	221	6,365	7,482
North Louisiana	9	3	3	15	335	357
Gulf Coast Louisiana	6	1	0	7	250	249
Total Louisiana	15	4	3	22	585	606
Arkansas	2	0	0	2	128	67
Montana	3	0	1	4	46	96
Wyoming	1	0	2	3	83	49
Colorado	0	0	1	1	6	6
New Mexico	5	0	1	6	289	402
Utah	0	0	0	0	1	1
California	24	1	4	29	701	789
Total United States	347	36	112	495	14,048	15,890
Total previous week	336	18	108	462		
Difference	11	18	4	33		

Outstanding Fields--Highlights

(Week Ending July 9, 1938)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
K.M.A.	91	123	6	6,187	561	16,150
Saxet-West Saxet	1	13	0	632	632	30,769
Benavides	3	10	3	478	211	9,947
East Texas	31	106	29	1,355	25,354	438,000
Ector County	19	74	7	11,404	1,137	43,347
Winkler County	8	13	4	2,943	1,662	40,300
OKLAHOMA						
St. Louis	5	26	5	1,382	660	20,500
Oklahoma City	5	7	1	779	1,087	113,000
KANSAS						
Barton County	2	21	1	418	330	7,281
Stafford County	3	18	3	678	144	2,394
Rice County	3	20	3	1,026	1,175	22,366
Russell County	4	22	1	297	1,095	23,704
NEW MEXICO						
Lea County	11	93	4	531	1,769	94,480
LA-ARK-TEX						
Rodessa, La-Ark-Tex	1	16	3	1,300	1,004	73,500
Jennings, La.	3	13	0	0	120	20,967
Cotton Valley (deep)	5	16	4	1,920	73	10,570
Lisbon, La.	1	16	3	2,040	239	10,515
Schuler, Ark.	1	18	1	970	66	14,130
MICHIGAN						
Buckeye	1	17	2	135	418	21,577
ILLINOIS						
Central Illinois	31	202	37	9,339	622	40,892
CALIFORNIA						
Wilmington	4	34	6	4,325	501	94,750
KENTUCKY						
Birk City	1	12	4	1,563	8	3,500

Southwest Texas District

By
F. L. SINGLETON

Well to East of South Alice Is Plugged Back for Testing

CORPUS CHRISTI, Tex., July 11.—Pan American Production Co. and others continue to test No. 1 Cook, 4,500 feet east of the South Alice field, Jim Wells County, which earlier in the week showed for a distillate producer. The test was made through perforated casing at 5,303-11 feet and in 2½ minutes it tested 225 pounds of working pressure and a slight amount of distillate. The hole has been plugged back to 5,185 feet and a drill stem test was to be made at 5,175-82 feet. The 5,100-foot horizon is the sand from which Walter Goldston No. 1 Lindsay and Reed is producing distillate.

Mills Bennett Production Co. No. 1 W. R. Perkins, 2 miles north of the field, was given little chance to produce as a drill stem test at 5,570-5,658 feet, showed 350 feet of salt water and 150 pounds of pressure. The hole has been plugged back and the 5,300-foot sand will be recored.

South of the town of Woodsboro, Refugio County, I. J. Allen No. 2 Driscoll Rooke is drilling below 6,200 feet, and has failed to log any additional showings. After making a drill stem test last week at 5,382-93 feet which showed 400 pounds of working pressure and a slight showing of distillate, the hole was cored to 5,440 feet, with gas sand cored at intervals from 5,393-5,410 feet, and from 5,434-40 feet. No. 1 Rooke is 1½ miles northwest of same operator's No. 1 Rooke, recently abandoned at 4,568 feet.

Preparations were being made to complete two wells in the East White Point field, San Patricio County, both of which will extend production a short distance. Plymouth Oil Co. No. 1 Brigham cored sand at 5,659-67 feet, total depth, and casing was cemented for completion. Texas Co. No. 1 Brigham, section 62, cored sand at 5,656-66 feet, total depth, and casing was cemented on bottom.

J. R. B. Moore No. 1 Pope, A. H. Kramer Survey, is looked upon as a possible three-quarter mile extension to the newly opened Casa Blanca field, Duval County, as a drill stem test at 1,199-1,207 feet showed several stands of pipe line oil. Magnolia Petroleum Co. No. 3 Duval County Ranch Co., 660 feet due south of No. 2 G.C.&S.F. R.R. Survey No. 291, is shutdown in sand at 1,220 feet.

The North Agua Dulce field, Nueces County, was extended one-half mile east when it flowed gas and distillate through perforated casing at 4,832-62 feet. The well is in the Venito L. Jaen Survey and is the second well completed on the structure which was discovered the first of the year.

In the LaReforma area, Starr County, Wheelock & Collins No. 1-A Guerra is drilling below 6,913 feet and has failed to encounter the high-pressure gas sand found in same operators' No. 1 Guerra about 200 feet north. The latter well blew out and ran wild for several weeks after coring sand around 6,600 feet. No. 1-A Guerra will be drilled to a contract depth of 7,500 feet where an electrical survey will be made.

On the Palangana salt dome, Duval County, Frank J. Gravis made location for No. 1 Scharlett, a northeast offset to the operator's No. 1-A Scharlett, discovery well. Southwest of the De Soto field, Survey 245, the same operator has started drilling on No. 1 Mergerle, which has been shut down for several weeks, and the well is scheduled to be drilled to the Cockfield formation or 6,000 feet. The test is on the same trend as Benavides, De Soto and Fitzsimmons fields, all of which are producing from the Cockfield. Leasing along this trend has gained momentum during the past three months.

North of the Samfordyce field, Hidalgo County, Phillips Petroleum Co. No. 1 Flores is being watched as the well attempted to blow out from a deep sand below 5,600 feet. It is in Porcion 39, Trace 250.

Along the Balcones Fault Line district, in Frio County, F. L. Thompson No. 1 Davis, an Edwards lime test, is plugging back after testing sulfur water on a drill stem test at 5,605-87 feet. The Edwards lime was topped at 5,632 feet and the well is reported to have shown oil and gas while coring below that point. The hole is being plugged back to approximately 3,700 feet where a showing was logged in the Taylor section.

Red Bank Oil Co. No. 1 Coffield, which opened an Edwards lime pool in Burleson County, pumped 77 bbls. of oil and 21 bbls. of salt water in 24 hours. Since its completion, a total of 1,525 bbls. of net oil has been recovered and the operators are expected to acidize in an attempt to increase the flow.

In the Darst Creek field, Guadalupe County, Humble Oil & Refining Co. is moving in material for two wells, one scheduled to be a deep test. Locations were made on the Denman lease for No. 25-A and 7-C Denman in the A. S. Emmett and William Arrington surveys. In the same county and 4 miles northwest of Sequin, H. F. Flowers is moving in rig for an Edwards lime test on the Arno Koept lease.

Northeast of Castroville, Medina County, D. K. J. Oil Co. was preparing for a production test at No. 1 Burnell, in the Mary E. Gage Survey No. 395. The hole has been plugged back from a total depth of 2,026 feet to 2,006 feet, where it is reported to have had a good showing of oil and gas.

In Kimble County, Plateau Oil Co. is preparing to start a second test in an area about 6 miles west of Jenciens, where its No. 1 Anderson was completed recently for a small pumper in the Ellenburger lime at 1,860 feet. The new test is about a half mile east of No. 1 Anderson which continues to pump 30 bbls. of fluid per day, 15 per cent 28-gravity oil.

In the East Telferner area, Victoria County, Harry L. Edwards has abandoned No. 3 D. L. Robertson at a total depth of 5,164 feet, and is moving rig to No. 1 M. C. Carpenter. Development in this field has been unsatisfactory owing to the thin sand section which overlies the structure.

Ogden & Riddle have started drilling No. 1 Benton in the newly opened Riddle field, Bastrop County. The discovery well was completed two weeks ago in the Dale lime section at 1,770-85 feet, and continues to pump 35 bbls. daily. The field is 5½ miles northwest of Red Rock, centering in the Henry Warnell Survey.

COMPLETED WELLS

Completed wells in proven fields of Southwest Texas with total depth and initial 24-hour gauge of producing wells.

Bee County

Plummer field: W. C. McBride No. 3-A Plummer, 3,037 feet, 62 bbls., quarter-inch choke.

Bexar County

Van Ormy field: Adams & Bassett No. 1 Stumberg, 1,250 feet, abandoned.

Caldwell County

Branyon field: Martel Petroleum Co. No. 11-E Young, 2,350 feet, 68 bbls. fluid, 5 per cent sulfur water. Salt Flats field: Millican & Norman No. 1 Merriweather, 2,732½ feet, 60 bbls. oil, 30 bbls. water. Walnut Creek field: F. W. Shield No. 1 O'Bannion, 1,460 feet, abandoned.

Duval County

Benavides field: Benedum & Trees No. 16 Puig, perforated casing 4,712-25 feet, 196 bbls., 5/32-inch choke. Hiawatha Oil & Gas Co. No. 13 Parr, 4,725 feet, 177 bbls., 5/32-inch choke. Glenn H. McCarthy No. 3 Snyder, perforated casing 5,329-49 feet, 111 bbls., quarter-inch choke. Casa Blanco field: Magnolia Petroleum Co. No. 2 Duval County Ranch Co., sand 1,203-07 feet, 108 bbls. oil, 12 bbls. salt water, one-half inch choke. Charamousca field: Magnolia Petroleum Co. No. 1 Duval County Ranch Co., 2,468 feet, abandoned. Driscoll field: Continental Oil Co. No. 24-A Driscoll, 3,346 feet, 158 bbls., quarter-inch choke. Fitzsimmons field: H. J. Porter No. 2 Fitzsimmons, sand 4,290-4,300 feet, 137 bbls., 5/32-inch choke. Hoffman field: Cox & Hamon No. 6 Cuellar Hagan, 2,809 feet, 100 bbls., jetting; No. 4 Ruiz, 2,745 feet, 40 bbls., jetting. Seven Sisters field: Reynosa Oil Co. No. 5-B Welder, 2,660 feet, abandoned. Sweden field: Hiawatha Oil & Gas Co. No. 5 Herberger, 6,121 feet, abandoned.

Guadalupe County

Darst Creek field: United North and South Development Co. No. 12-A Dix, 2,492 feet, 111 bbls., pumping.

Hidalgo County

Samfordyce field: Weekly Oil Co. No. 6 George, 2,880 feet, 116 bbls., one-eighth inch choke.

Jim Hogg County

Alworth field: French Oil Co. No. 1 Garza, 1,088 feet, abandoned.

Jim Wells County

Alfred field: Gilcrease Oil Co. No. 2 Adams, 3,324 feet, abandoned. South Alice field: H. H. Howell No. 7 Lindsay & Reed, perforated casing 5,280-5,300 feet, 161 bbls., one-eighth inch choke; No. 12 Lindsay & Reed, perforated casing 5,251-70 feet, 155 bbls., one-eighth inch choke. Premont field: J. R. Nash No. 1 Hyde, 2,370 feet, 100,000 feet of gas. Miss.-Tex. Oil Co. No. 1 J. J. Soppe, 2,365 feet, 10 bbls. oil, 200 bbls. fresh water.

Nueces County

Agua Dulce field: Union Producing Co. No. 1 H. W. Gee, 4,861 feet, 15,000,000 feet of gas, open flow. Luby field: Seaboard Oil Co. No. 13 Luby, 4,370 feet, 136 bbls., one-eighth inch choke; No. 24 Luby, perforated casing 5,063-68 feet, 151 bbls., one-eighth inch choke; No. 33 Luby, perforated casing 4,355-59 feet, 130 bbls., one-eighth inch choke. Richard King field: Southern Minerals Oil Corp. No. 9 King, perforated casing 4,018-21 feet, 125 bbls., 14 bbls. salt water, one-eighth inch choke.

Refugio County

Tomoconnor field: L. A. Nordan No. 8-B O'Connor, 5,915 feet, 541 bbls., one-fourth inch choke. L. A. Nordan No. 14-B O'Connor, 5,923 feet, 649 bbls., one-fourth inch choke.

San Patricio County

East White Point field: Plymouth Oil Co. No. 1-F Cole, 5,655 feet, 137 bbls., one-eighth inch choke. Midway field: Harlan Grimes No. 1 Coggins, 5,347 feet, 115 bbls., 7/64-inch choke. Phillips Petroleum Co. No. 4 Schmidt, 5,350 feet, 114 bbls., 7/64-inch choke.

Victoria County

East Telferner field: Harry L. Edwards No. 3 D. L. Robertson, 5,164 feet, abandoned. Heyser field: Sinclair Prairie Oil Co. No. 9 W. H. Bennett, perforated casing 5,732-35½ feet, 110 bbls., 9/64-inch choke. George Echols No. 2-B O. M. Lander, perforated casing 5,948-54 feet, 78 bbls., 12 hours, 7/64-inch choke.

Webb County

O'Hern field: O. W. Killam No. 63 Bruni, 3,476 feet, perforated casing 2,867-72 feet, small gas well.

Zapata County

Escobas field: Dulup Oil Co. No. 35 Trevino, 1,998 feet, abandoned.

Schlumberger ANNOUNCES TERMINATION OF INFRINGEMENT SUIT AGAINST GEOANALYZER

In the suit for infringement of Schlumberger patent No. 1894328 involving the electrical logging of drill holes, brought by Schlumberger Well Surveying Corporation against Geoanalyzer Corporation in California, the following decree was entered by the United States District Court for the Southern District of California, Central Division, on June 9, 1938.

IN THE UNITED STATES DISTRICT COURT, SOUTHERN DISTRICT OF CALIFORNIA, CENTRAL DIVISION.

Schlumberger Well Surveying Corporation, Plaintiff, vs. Geoanalyzer Corporation, Defendant.
In Equity No. 873-S

FINAL DECREE

THIS CAUSE came on to be heard at this term and the Court having been fully advised in the premises, and it appearing that Lane-Wells Company, a corporation, has conducted the defense of this suit on behalf of the Geoanalyzer Corporation, the Defendant herein, and is privy thereto, now thereupon consideration thereof it is — ORDERED, ADJUDGED AND DECREED AS FOLLOWS:

1. That the Plaintiff, Schlumberger Well Surveying Corporation, is the sole and exclusive owner of all the right, title and interest in and to United States Letters Patent No. 1894328.
2. Patent No. 1894328, having been duly issued by the United States Patent Office is presumptively valid as to the single claim contained therein.
3. The use of an automatic recording device in the place of manual determinations of electrical values in such a device disclosed in the patent in suit is the equivalent thereof.
4. That the Defendant, Geoanalyzer Corporation, has infringed upon said United States Letters Patent No. 1894328 by making and using Electrical Devices for the Determination of Specific Resistivity embodying and containing the invention of said Letters Patent as set forth in the claim thereof.
5. That an accounting and costs having been waived by Plaintiff, there shall be no accounting by the Defendant of profits or damages, nor shall costs be taxed against either party herein.
6. That an injunction shall issue out and under the seal of this Court restraining the Defendant, Geoanalyzer Corporation, its officers, directors, associates, clerks, servants, agents, workmen, employees and confederates and each of them from directly or indirectly manufacturing, using or selling or causing to be manufactured, used or sold, or threatening to manufacture, use, or sell Devices embodying, employing, containing or adapted to practice the invention and improvements or discoveries described and claimed in United States Letters Patent No. 1894328.
7. Lane-Wells Company is in privity with the defendant herein.

Ralph E. Jenny
United States District Judge.

DATED: June 9th, 1938.

APPROVED AS TO FORM UNDER RULE 44:
Lyon & Lyon,
Leonard S. Lyon,
Attorneys for Defendant.

Decree entered and recorded June 9, 1938.
R. S. Zimmerman, Clerk,
By Theodore Hocke, Deputy Clerk.

(ENDORSED)
FILED JUNE 9, 1938 R. S. Zimmerman, Clerk
By Theodore Hocke, Deputy Clerk.

In connection with the termination of the litigation between Schlumberger Well Surveying Corporation and Geoanalyzer Corporation (defended by Lane-Wells Co.) by entry of the above decree Geoanalyzer assigned all of its patents and applications relating to electrical logging to Schlumberger, Schlumberger granted to Lane-Wells a license under all of its patents relating to electrical logging, and Lane-Wells granted to Schlumberger a license under all of its patents relating to gun perforating.

SCHLUMBERGER TAKES PLEASURE IN ANNOUNCING TO THE OIL INDUSTRY THAT IT WILL SHORTLY OFFER A COMPLETE SERVICE IN GUN PERFORATING WHICH HAS BEEN PRACTICED SUCCESSFULLY FOR YEARS IN FOREIGN COUNTRIES.

SCHLUMBERGER
WELL SURVEYING CORPORATION
HOUSTON, TEXAS—U.S.A.
"Electrical Well Logging"

Eastern Field Report

By STAFF CORRESPONDENT

Deep Tests Near Completion Presenting Interesting Data

PITTSBURGH, Pa., July 11.—Several of the deep tests in the lower eastern fields are approaching completion and present interesting data. On Chestnut Ridge, in Wharton Township, Fayette County, Southwest Pennsylvania, Greensboro Gas Co. is drilling at 7,504 feet or 144 feet in the Onondaga with no showing of gas and running low on structure compared to the discovery well, No 1. Heyn (Summit Hotel). This test on the J. R. Thompson farm is approximately one-half mile northeast of No. 1 Heyn and has a surface elevation of 2,577 feet compared to 2,316 feet in the Heyn well. Summarizing the comparison from the Thompson record, the top of the Onondaga was 7,360 or subsea minus 4,783 feet. In No. 1 Heyn the top of that formation was at 6,575 feet or subsea minus 4,259 feet, proving the structure plunging northeast and 524 feet lower at the Thompson test.

The top of the Chert in the Thompson test was at 7,381 feet and in No. 1 Heyn at 6,597 feet or about the same distance in the Onondaga in both. In the discovery well, gas was struck about 11 feet in the Chert and the total depth was 60½ feet. The Thompson test has reached 123 feet in the Chert, some of which may be accounted for by the angle at which it appears to stand.

In the deep rotary test of South Penn Oil Co. and others on the Fred Backhaus farm on the Kellersburg anticline in West Deer Township, Allegheny County, 145 feet in the Onondaga the formation softened considerably and coring was started at 6,496 feet. The samples were then showing an absence of chert and the presence of chalky and clear calcite. It is believed to be nearing the Oriskany caprock.

In West Virginia, the test of W. H. Bickel on his own property in Lubeck district, Wood County, topped the Oriskany sand at 4,426 feet and has drilled 3 feet in that formation which is hard and close but of good quality. No showing is expected in that formation for the next 5 to 8 feet.

Completions in the lower eastern fields totaled 19 for the week of which five were dry, 11 gas wells and three producers with a daily initial of 38 bbls. All of the new production is in Southeast Ohio.

SOUTHEAST OHIO

Completions in Southeast Ohio were confined entirely to Perry County. In Jackson Township, SW quarter section 11, Kissling Drilling Co. completed a test on the W. H. Welch farm in the Clinton sand at 3,030 feet. It produced 10 bbls. the first 12 hours after shot.

In the NW quarter section 36, Coal Township, Perry County, Preston Oil Co. completed No. 8 Charles Trimmer farm in the Clinton sand at a depth of 3,662 feet. There was an oil showing in the sand estimated good for 15 bbls. a day after shot.

In the SE quarter section 28, Monroe Township, Perry County, C. Z. Ruth completed No. 20 William Nuzum farm in the Berea sand at 1,148 feet. It produced 3 bbls. the first day after shot. In the NW quarter section 33, Pleasant Township, N. L. Altier drilled No. 11 Thomas E. and Mary Monahan through the Berea sand to 1,982 feet and it was dry.

SOUTHWEST PENNSYLVANIA

Several tests were completed in Southwest Pennsylvania. In Allegheny County, Alex Wally completed a test on the Hunter farm in Ross Township in the Hundred-Foot sand as a gas well. In Harmar Township, Rodgers Development Co. drilled No. 3 Grace W. Wolf through the Snee sand to 2,050 feet and it was dry.

In Beaver County, Tope and others drilled on the J. W. Ramsey farm in Hanover Township through the Berea grit and it was dry.

In Greene County, Equitable Gas Co. deepened No. 1 C. J. Conklin in Center Township to 3,634 feet through the Bayard sand and there was no additional gas below the Fifty-Foot sand. It gauged 192,000 feet.

In Indiana County this company completed No. 3237 on the T. C. Armstrong farm in South Mahoning Township at 3,535 feet, with 40,000 feet a day after shot from the Murraysville, Tiona, and Bradford sands with a rock pressure of 505 pounds.

In Washington County, Finleyville Oil & Gas Co. drilled to 4,231 feet on the A. M. Figley farm in Union Township, with a showing of gas only in the Bayard sand and a little in the Speechley shells.

In Morris Township, Washington County, Union Gasoline & Oil Corp. has a location for No. 816 or second test on the G. L. Craft farm. In Amwell Township, this company is down 2,868 feet in the No. 2 Leroy Van Kirk, with a show of gas at 2,728 feet. F. K. Fawcett and others have rebuilt rig after fire in the No. 1 L. Bronder, which was deepened to the Fifth sand and showing for a good producer.

In North Strabane Township, Beedle & Debone reached 2,740 feet deepening on the John Arblaster farm. The Fifth sand was at 2,634-54 feet with oil showing at 2,636 feet which was shot with 15 quarts and did not improve.

In this township, Penn Ohio Oil & Gas Co. are drilling at 980 feet on the W. E. Davis farm. In Hanover Township, Coulter & Duncan are down 1,690 feet on the John Dennis farm.

Greene County

In Center Township, Greene County, Charles Mong and others are drilling at 1,370 feet in No. 3 Jesse L. Metz with a hole full of water from the Murphy sand. Equitable Gas Co. is moving in a machine to deepen No. 1 D. M. Thorp. J. B. Orndoff has not been able to resume drilling No. 2 G. M. Scott which is in trouble at 1,539 feet.

In Franklin Township, Equitable Gas Co. is down 2,175 feet and cementing cave deepening No. 1 W. L. Jacobs. In Jackson Township, this company has reached 3,351 feet in the No. 1 C. S. Orndoff and 2,320 feet in No. 1 Allman. In Washington Township, this company is building rig for the John Huffman test.

In Richhill Township, Penn Ohio Oil & Gas Co. is spudding on the H. W. Ealy (Conklin) farm. Furman Nuss has reached 1,900 feet in the second test on the Charles Swart farm.

In Greene Township, Carnegie Natural Gas Co. is deepening No. 2 Morris at 2,692 feet. In Aleppo Township, Cochran & Cochran are drilling by lost tools at 1,661 feet in No. 4 John Strope.

In Center Township, Union Gasoline & Oil Corp. No. 4 on the Braddock & Cook is showing some improvement over the 1 bbl. reported. The Nineveh Thirty-Foot sand was at 2,926-58 feet with the oil at 2,949-55 feet and a total depth of 2,964 feet.

In Allegheny County, J. S. Wally and others are drilling at 1,400 feet on the Anna H. Brown farm in Shaler Township. In Patton Township, T. W. Phillips Gas & Oil Co. is down 3,200 feet in No. 2 Grimm Coal Co.

In Fayette County, Boyd Gas Co. of Erie has reached 2,300 feet on the Desko farm in Nicholson Township, an Elizabeth sand test.

Deep Tests

In Westmoreland County, Peoples Natural Gas Co. is drilling at 7,543 feet in the rotary test on the John S. Marshall farm in Penn Township and on the Grapeville anticline. This is 80 feet in the Onondaga.

In Beaver County, John T. Galey and others are drilling at 2,100 feet on the Eliza Allen heirs in South Beaver Township.

On Chestnut Ridge, Wasson & Co. has reached 4,000 feet on the J. H. Sorg farm in North Union Township, Fayette County. In Springhill Township, same county, L. J. Houze Convex Glass Co. is past the 5,600-foot level on the Paul Dunham farm.

WEST VIRGINIA

No producers were completed in West Virginia and completions consisted of one dry hole and eight gas wells, one of which though small was interesting. In Putnam County, V. C. Smith Management Co. drilled on the East End Land Co. in Teays Valley district, through the Oriskany sand. There was a gauge of 33,624 feet a day in the Berea and 17,136 feet a day in the Brown shale. It is 1 mile east of the Cabel County line and 3 miles north 20 degrees west of Hurricane.

In Boone County, Columbian Carbon Co. deepened No. 4 R. H. Wood and others in Sherman district to 4,823 feet, probably through the Oriskany though no record is available and has a gas well gauging 67,392 feet.

In Gilmer County, Paul K. Weekley completed a test on the O. S. Brannon farm in DeKalb district at 1,747 feet. The Maxton sand was at 1,714-43 feet with 5 bbls. of oil at 1,730-43 feet and 280,000 feet of gas at 1,532-57 feet.

In Lincoln County, two wells were deepened and made gas wells. Kanawha Gas & Utilities Co. deepened No. 1 Huey Cummings in Union district to 3,368 feet with 170,000 feet of gas at 2,955 (white slate) 3,072 and 3,246 feet. Blue Ridge Gas Co. deepened No. 2 Enos Scraggs from 2,126 to 3,104 feet and it gauges 68,000 feet.

In Pleasants County, Sud Powell drilled on the Mary J. Wagner farm in Lafayette district through the Cow Run sand to 910 feet and it was dry.

In Putnam County, H. H. Pine completed a fair gas well in the second test on the P. S. Eggleton farm in Scott district, with 600,000 feet showing at 1,125 feet 72 hours after shot.

In Wirt County, S. W. Douglass completed a test on the E. A. Kidwell farm in Burning Springs district in the slate and lime at 2,651 feet. There was 50,000 feet of gas in the Keener sand.

Oriskany Gas Field

One large well was completed in the Oriskany gas pool in Kanawha County. In Poca district, Mullins Gas Co. completed the test on the Esta Fisher Bonham farm at 5,115 feet with the Oriskany sand topped at 5,102 feet and a gauge of 19,149,000 feet.

Lima Gas Co. made a location on the A. T. Mairs heirs farm, elevation 905.52 feet, Poca district. United Fuel Gas Co. located No. 4,804, same district, on the W. H. O'Dell and W. J. Glass farm, elevation 779.4 feet. Glenn Oil & Gas Co. made a location on the Mary Beaver farm, elevation 860.37 feet.

In Malden district, Kanawha County, North Eight Producing Co. has drilled 24 feet in the Oriskany sand topped at 4,853 feet on the L. E. and R. Belcher farm and failed to find gas at that depth.

In Poca district, Guy B. Ray topped the Oriskany sand at 4,951 feet on the Emmet Thaxton farm and at 4,977 feet had a showing of only 67,000 feet.

Several tests reached the Corniferous lime. In Elk district, Columbian Carbon Co. topped the Corniferous at 4,858 feet in the B. F. Jones test and is drilling at 1,845 feet in No. 12 C. W. Vickers and 745 feet in the W. B. Fogarty test.

South Penn Oil Co. cased at 4,972 feet in the Corniferous lime in No. 5 T. H. Newhouse and is drilling to the sand. This company is drilling at 3,604 feet in the Beanne-Newhouse line well and 2,595 feet in the Virginia E. Monk test.

(Continued on Page 77)

North Louisiana, Arkansas

By GEORGE WEBER

Cotton Valley Sand Stringer Production Test Successful

SHREVEPORT, La., July 11.—Numerous scattered field and wildcat tests figured in important developments in the tri-state area this week. In the Cotton Valley field, the "D" sand stringer, which has shown saturation in numerous wells completed in the Bodcaw, has been given its first production test. Added to the assurance of a new producing horizon in the field, was completion of a south edge well in the deep Bodcaw, and final completion of the southeast outpost which several weeks ago brought in the first Bodcaw crude production.

Wildcats in Caddo Parish, Louisiana, and Shelby County, Texas, created interest with reported shows of oil and gas. A test in the Converse area of Sabine Parish blew out but was shut in. Among the most interesting outpost tests, is a wildcat drilling southwest of the Jefferson section of Rodessa in Marion County, Texas, which topped markers this week, showing its relation to tests nearer the field.

Cotton Valley Operations

Most interesting completion in the Cotton Valley field is Midstates Oil Corp. No. 1 Welori Lumber Co., C NW NW section 3-20-10. The mile south outpost topped the Lower Marine at 8,072 feet several days ago, and Bodcaw was topped, according to cuttings, at 8,597 feet. The sand of interest, however, is not the Bodcaw, which shows saturation as in wells in the field proper, but the "D" sand stringer immediately above it. The well was completed flowing 40 bbls. of oil per hour through a quarter-inch choke. The oil is straw-colored, with a gravity of 44.4 degrees.

The "D" sand was cored at 8,502-28½ feet, with all but 7 feet of the recovery showing good saturation of distillate and gas. Operators set 7-inch casing at 8,656 feet and perforated at 8,502-33 feet with 120 shots in a production test. The well is bottomed at 8,687 feet, and was plugged back to 8,655 feet. This was the first production attempt in the sand stringer, although the "D" sand has shown saturation in other wells in which it was cored. The test in the upper body does not arise from a failure in the Bodcaw, but was undertaken as an exploratory move to determine what the sand will do.

A south edge test, between the Midstates test and the main body of the field, Fohs Oil Co. No. 1 Crichton, C SE SE section 33-21-10, was completed in the deep Bodcaw sand for an initial production of 225 bbls. of distillate together with 1,000,000 feet of gas estimated flow on a quarter-inch choke. Tubing pressure is 265 pounds and casing pressure 2,625 pounds. Total depth is 8,598 feet and perforations were shot at 8,491-8,518 feet.

Two other Bodcaw distillate wells were completed. Ohio Oil Co. No. 1 A. H. Gray, C NE NE section 26-21-10, made 324 bbls. of the light oil with an estimated 5,000,000 feet of gas through a quarter-inch choke from the sand at 8,043-8,101 feet. Casing pressure was 2,800 pounds and tubing pressure 2,750 pounds. Total depth is 8,103 feet.

A. G. Oliphant No. 2 Hodges, C NW NE section 34-21-10, came in making 427 bbls. of distillate and an estimated 3,000,000 feet of gas in 20 hours through a three-eighths inch choke, with tubing pressure of 2,550 pounds, casing pressure of 2,650 pounds and total depth at 8,205 feet.

The southeast outpost, Stanolind Oil & Gas Co. No. 1 Pardee, SW NE section 36-21-10, which last month opened crude production in the Bodcaw, was completed through the tubing. It was originally completed flowing through the annular space between casing and tubing, due to a plugged production string. In pulling tubing several days ago to clean it the plug was dislodged and the well is ready for commercial production.

An outlet was assured during the week, with announcement by Magnolia Petroleum Co. that a 2-mile spur line will be laid from the field to the well, which will be placed on regular production in a few days.

E. T. Oakes and others No. 1 Kilgore, Lisbon outpost test, is still encountering difficulty in completion attempts. The operators attempted to reacidize, without success, and were swabbing acid water late in the week, with a small show of oil. The oil which rises in the hole is of heavier gravity than that produced in the field proper. A split casing around 2,400 feet is blamed for the acidizing failures. The rig is being moved off, but it is reported another operator, A. O. Olson, will resume work on the test, or drill another in an offset position.

Caddo Wildcat

The most interesting wildcat test this week in North Louisiana is R. E. Allison No. 1 Ellerbee, NW cor. section 27-18-14, near the spillway on Cross Lake, on the edge of Shreveport. The rank wildcat was contracted for 6,000 feet. This week a total depth of 6,025 feet was reached, and a string of 7-inch casing set. Information on geology and possible oil shows are not being made public, but it is reported shows of porosity on the Schlumberger log will be tested.

In addition to the Caddo Parish wildcat, three others drilling in North Louisiana were of interest. In Bienville Parish, the Gulf Oil Corp. No. 1 Goodpine, deepest current drilling test, ran a Schlumberger survey, and was drilling below 10,762 feet at latest reports. Geological information of considerable value is being obtained.

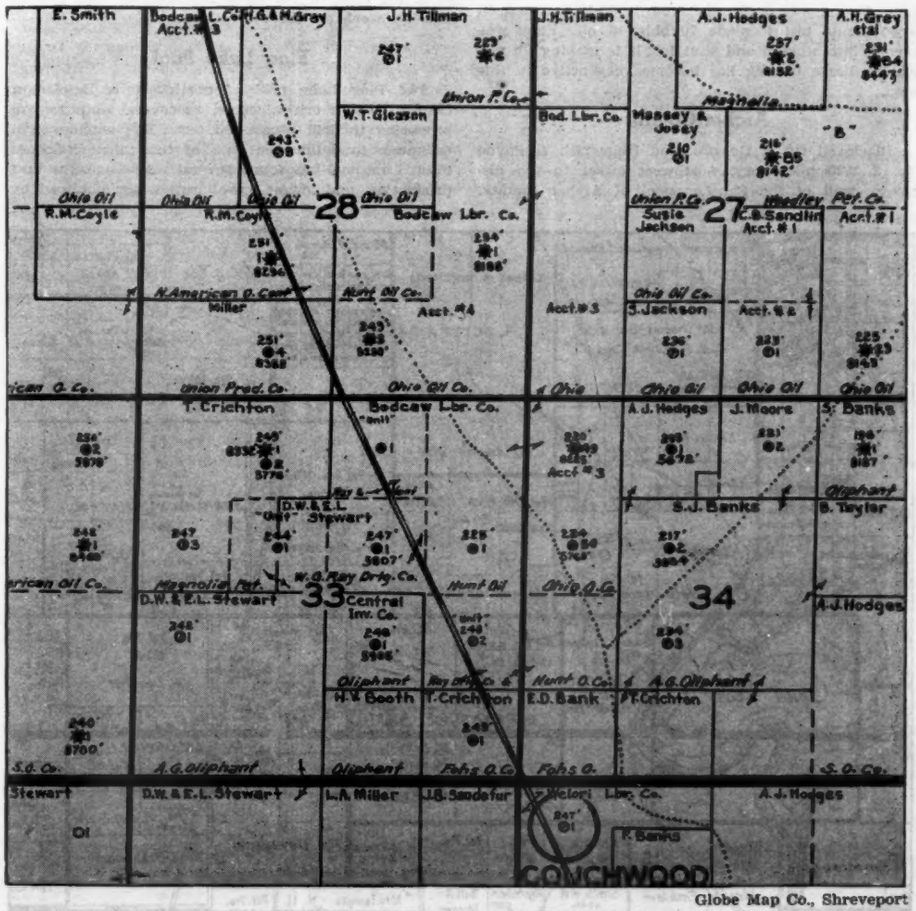
Union Parish is the scene of another deep test, Standard Oil Co. of Louisiana No. 1 Frost Lumber Co., drilling in hard sandy shale below 9,890 feet. This test is in the Farmerville area in section 14-21-1e.

S. S. Alexander No. 1 Stoll, north outpost to the Logansport gas area in De Soto Parish, after encountering show of oil and salt water at 5,453 feet, plugged back to 4,110 feet and was arranging to reperforate at that level. The old total depth is 5,453 feet.

In Bossier Parish, Premier Investment Co. No. 1 McDade, SE SW NE section 28-19-11, tested an estimated flow of 1,000,000 feet of gas at total depth of 2,374 feet where it is shut in. The test is in the Bellevue field.

In the Converse area of Sabine Parish, to the

(Continued on Page 89)



Globe Map Co., Shreveport

Midstates Oil Corp. No. 1 Welori, indicated by the large circle, is the first deep Cotton Valley well to test the "D" sand of the Lower Marine series. The well is bottomed at 8,687 feet, and was plugged back to 8,655 feet, and perforated at 8,502-33 feet in the sand. It started at 40 bbls. per hour

North and East Texas

By MITCHELL TUCKER

New Pool Near Wichita Falls Most Important Since K.M.A.

WICHITA FALLS, Tex., July 11.—A new deep oil pool in Wichita County, practically in the suburbs of Wichita Falls, was assured last week by Continental Oil Co. and Petroleum Producers Co. No. 1 State Asylum, Block 1, Cherokee County School Lands, 3 miles south of the city. The well, producing from the Marble Falls formation of the Bend series, is estimated good for 500 to 1,000 bbls. daily, and is considered the most important discovery in the county since the K.M.A. pool, about 10 miles west. Saturation in sand was found from 5,076 feet to 5,129 feet and after a 3,000-gallon acid treatment the well started flowing under 400 pounds of casing pressure. Two storage tanks, flow lines and a separator have been installed and it is now shut in awaiting the official gauge. Continental has already announced purchase of 440 acres about 1 mile south on the Wichita-Archer County line. Consideration was for $50 per acre or $22,000, of which $11,000 was cash and the balance out of oil.

Possibility of a new Canyon lime oil pool in Wichita County was also seen last week in King Oil Corp. and Madden Goldsmith No. 1 Jackson, Block 20, Denton County School Lands, 1 mile north of Holiday. It was drilled to the K.M.A. pay section, found dry and plugged back to the Canyon for possible production. Casing was perforated from 2,630-40 feet and on a 30-minute test it made 70 bbls. of oil. Flow was turned into storage and shut in. It is making no salt water. Lease trading has become very active in this area.

Archer County

Blackwell Oil & Gas Co. and Helmerich & Payne No. 2 Wilson-McCrory, northwest offset to the discovery well of the Panther pool of Archer County, last week flowed 121 bbls. of oil in three hours, railroad commission gauge, giving the pool a new pay horizon. The new horizon is from 4,347-61 feet, approximately 500 feet below the regular pay pool. This is the only well in the pool producing from this level.

North extension to the Panther pool was seen last week when L. T. Burns No. 1 Ahrens, southeast corner of Block 127, Abner Nails Survey, north offset to Thurman & Lipscomb No. 1 Wilson, which extended the pool three-quarters mile to the northwest, cored saturation in lime from 3,931-62 feet. Casing has been cemented at 3,932 feet and plug will be drilled the first of the week.

Burns & Ligon No. 1 Nichols, about 1 mile southeast of the Panther pool, was dry in the regular K.M.A. pay section at 3,888 feet but will continue to 4,300 feet seeking to tap the horizon found by No. 2 Wilson-McCrory.

EASTERN TEXAS

DALLAS, Tex., July 11.—New locations in the East Texas field numbered 31 last week, an increase over the all-time low of 18 the week before. Development of inside properties continues without recession, as at the close of the week 106 drilling wells and 31 rigs up were on the active list.

Flag Lake Pool

The Flag Lake pool of northwestern Henderson County is at a critical stage, as several outposts are preparing to drill plugs and test. The outcome will do much to define the area of this small Balcones Fault Line pool. As found several weeks ago, the best production, and lowest gas-oil ratios, are obtained by cementing casing on bottom, and selectively perforating in the oil section. This shuts out the large gas horizon above the oil level, which gave much trouble in earlier completions. Two tests, Texas Co. No. 2 Nolan, south offset to its mile and one-half southwest extension, and Richards & Holloway No. 1 J. P. Tarkington, south offset to Peyton Brothers No. 1 Carter, best producer in the south extension area, are both waiting on cement after setting casing through the sand.

The southwest outpost, Peyton Bros. No. 1 Tarkington, has drilled to 3,170 feet and not yet logged the pay horizon. This well may definitely establish the boundary in that direction. A new southeastern outpost was staked last week by Thurman & Ford, No. 1 K. H. White in the southwest corner of the Thomas Mitchell Survey, about half-way between their recent failure and that of Hawkins & Howell. Two miles north in the territory between the pool opener and the south extension area, Texas Canadian Oil Co. is moving in machinery for its No. 1 R. Mallory.

Deep Combination Wells

Both of East Texas' two recent deep so-called "gas-distillate" discoveries were back on production last week, reporting their first 24-hour gauges. Hunt Oil Co. and others No. 1 Bradley, Glen Rose lime discovery near Chapel Hill in Hunt County, gauged 270 bbls. of 62-gravity white distillate in 24 hours, with gas volume testing 3,000,000 feet, total depth 7,325 feet. Less than 1 per cent was basic sediment, and the pressures recorded were 2,700 pounds on tubing, with 400 pounds on the separator.

Humble Oil & Refining Co. and Gulf Oil Corp. No. 1 E. Robertson, another Glen Rose discovery southeast of Longview in Gregg County, is flowing 26 bbls. of distillate daily with 5,000,000 feet of gas under a tubing pressure of 500 pounds. It is showing 15 per cent wash water. Production is through perforated casing, 7,244-86 feet. This well had formerly been drilled to 10,286 feet.

For the purpose of further exploring their joint 15,000-acre block, Humble and Gulf have announced intentions to drill another well to the Glen Rose horizon on the Porter Horton lands in the northeast quarter of the west half of a 2,300-acre tract in the Henry G. Hudson Survey. Location will be about 1 mile south of the partnership's discovery, and about 8½ miles southwest of Longiew. Also, it is about 5 miles east of the East Texas field.

Opelika Area

Humble Oil & Refining Co., Tide Water Associated Oil Co., and Seaboard Oil Corp. temporarily have abandoned plans for another deep test in the Opelika area of northeastern Henderson County, where they have one deep oil producer and one gas-distillate producer. The companies were unsuccessful in unitizing two 600-acre drilling blocks because of the scattered and numerous persons and companies holding titles.

EAST CENTRAL TEXAS COMPLETIONS

(24-hour tests)

Anderson County

In the Cayuga field, Tide Water Oil No. 6 W. H. C. Goode, 3,979-4,022 feet, 173 bbls.

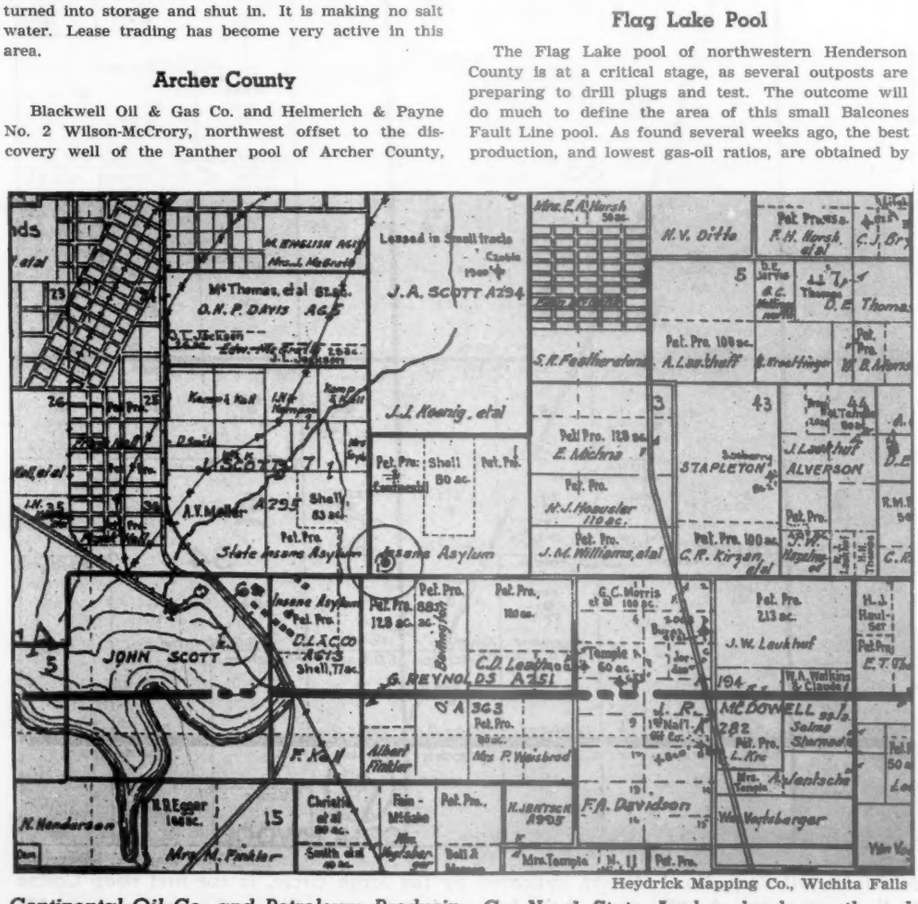
Bowie County

King Oil Co. No. 1 M. Watts, dry and abandoned at 4,574 feet.

Navarro County

R. G. Dickinson No. 1 Swink, dry and abandoned

(Continued on Page 91)



Heydrick Mapping Co., Wichita Falls

Continental Oil Co. and Petroleum Producing Co. No. 1 State Asylum lands, south and east of Wichita Falls, Wichita County, which has opened a new deep oil pool for the southeastern part of the county about 10 miles east of the K.M.A. field

Texas and Louisiana Gulf

By
NEIL WILLIAMS

Gueydan, West Hackberry and Valentine in Spotlight

HOUSTON, Tex., July 11.—The discovery of distillate production at the West Gueydan prospect, Vermilion Parish, and the opening of prolific production from new sands at the West Hackberry and Valentine fields in Cameron and Lafourche parishes, continued to keep the Coastal Louisiana sector in the spotlight of Gulf Coast operations.

Magnolia Petroleum Co. No. 1 J. B. Ferguson, section 5-12s-2w, about 6 miles west of the Gueydan field, perforated casing at 7,140-50 feet, and was completed for an estimated initial production of 70 bbls. of 60-gravity distillate per day. The well is flowing through a quarter-inch choke, showing 2,600 pounds of tubing pressure and 2,650 pounds of casing pressure. Production is from the Marginulina formation, and the completion was made after the hole had been drilled to 9,144 feet.

An increase in drilling around the flanks of the old West Hackberry salt dome, Cameron Parish, is anticipated following completion of Superior Oil Co. No. 2 Vincent which established the first deep production on the southwest flank. Oil sand with broken shale streaks was cored at 5,484-6,523 feet, and the well flowed 469 bbls. per day through a 11/64-inch choke, with tubing and casing pressure 1,100 pounds. No. 2 Vincent is in section 30-12s-10w, a short distance from a distillate producer.

Valentine Field Extended

William Helis No. 2 Valentine Sugar, Inc., section 3-17s-20e, approximately 4,000 feet west of production at the Valentine field, Lafourche Parish, provided the field with one of its best producers when completed in a new sand for an initial production of 54 bbls. per hour through a quarter-inch choke, with tubing pressure 2,250 pounds and casing pressure 2,150 pounds. Saturated sand was cored last week at 7,464-7,500 feet and completion was made after the hole had been drilled to 7,582 feet. Seven-inch casing was cemented at 7,454 feet. This is the first production opened on the dome by an independent operator as all production heretofore was controlled by Pan American Production Co.

In the newly opened Bancroft field, Beauregard Parish, Republic Production Co. has derrick up for a second test, No. 1 Columbia Land & Timber Co., section 16-6s-13w. The discovery well was recently completed in the Cockfield formation as a distillate producer.

In the Gibson field, Terrebonne Parish, Shell Petroleum Corp. is preparing to complete No. 6 Pelican which is bottomed in oil sand at 9,505 feet, with 7-inch casing cemented at 9,485 feet. It is in section 20-17s-15e. In the southeastern part of the parish, in the Lirette field, Humble Oil & Refining Co. cored oil sand in No. 1 Wurzlow in a sidetracked hole from 8,424-35 feet, total depth, and casing has been cemented for completion. If productive this will be the first oil well as the discovery well was a distillate producer through perforated casing at 10,520-24 feet.

Mechanical trouble has delayed testing of a shallower sand by Humble Oil & Refining Co. in the North Crowley field, Acadia Parish. Casing was perforated in No. 3 Federal Land Bank at 7,192-98 feet, and the swab was lost while testing. In the South Crowley field, the company cemented casing in No. 1 Boyd Finch, preparatory to testing oil sand, cored in a sidetracked hole at 7,296-7,307 feet. No. 1 Finch is the discovery well, although it is being worked over due to salt water encroachment which appeared shortly after placed on production.

Pan American Production Co. opened a shallow gas sand on the Sorrento dome, Ascension Parish, with No. 11 United Lands, section 15-10s-4e. The completion was made at 1,293 feet and the well flowed 500,000 feet through a quarter-inch choke. Location was made by the company for No. 12 United Lands.

In the Villa Platte field, Evangeline Parish, Continental Oil Co. completed No. 1 J. E. Vidrine, with an initial production of 472 bbls. per day through a three-sixteenths inch choke. Same company's No. 1 Pitre cored oil sand at 8,992-9,053 feet, and casing is being cemented.

On the west flank of the Welsh dome, Stanolind Oil & Gas Co. has derrick up for a second test, No. 1 Pousson, section 28-9s-5w, approximately 2 miles southwest of No. 2 Conover, section 20, which is drilling in a sidetracked hole below 5,150 feet. The latter well attempted to blowout from a total depth of 7,353 feet, sticking the drill stem, and resulting in the hole being plugged back and sidetracked.

In Orleans Parish, on the southwest edge of Lake Pontchartrain, W. T. Burton made location for his third wildcat, No. 2-B Faubourg de Montluzin, 19,600 feet south, 11 degrees, 30 feet west from Pointe Aux Herbes lighthouse, section 1-11s-13e. No. 1 State, in the lake, is drilling shale below 3,700 feet.

There were no outstanding developments along the Texas Coast, although the testing of Union Producing Co. No. 1 Goodykoontz, 1½ miles northeast of the Fairbanks field, Harris County, continues to hold some interest. After testing salt water through perforated casing at 7,472-80 feet, perforations were made at 7,444-53 feet, and the well flowed gas with a slight trace of distillate through a 11/64-inch choke with tubing pressure 1,800 pounds and casing pressure 1,950 pounds. At the close of the week, the well was killed and the perforation squeezed off preparatory to retesting at a higher level. Since the well logged only a slight showing in the discovery horizon at 6,800 feet, it is regarded by some as being located on a separate structure. The showing of gas has attracted much attention and the area will receive additional development regardless of whether the well makes a producer.

The showing of Texas Co. No. 5 Freeport Sulphur Co., Bryan Mound dome, Brazoria County, is being watched with interest. Sand and sandy shale showing oil was cored at intervals from 2,889-3,163 feet. Additional showings were logged last week around 2,600 feet. Several tests have been drilled around the flanks of this dome, but all were abandoned due to mechanical trouble.

A slight west extension to the Hitchcock field, Galveston County, was recorded with completion of N. W. Hunter No. 1 Aaron Cohen flowing 3 bbls. per hour through a 5/64-inch choke from perforated casing at 5,152-56 feet. Maco Stewart has rig up for No. 3 fee, 660 feet due east of the above completion in the J. Spillman Survey.

One and one-half miles northeast of the Palacios field, Matagorda County, Glenn H. McCarthy made location for No. 1 Nancy Moffett and others in section 22, Susan Perkins Survey. In the Bay City field, Hamman Exploration Co. No. 2 G. M. Sloan, 1,180 feet northeast of No. 1, was completed for an initial production of 184 bbls. of distillate. Sand was cored at 9,210-56 feet and completion was made through perforated casing at 9,200-32 feet.

In the newly opened Cordelle field, Jackson County, Magnolia Petroleum Co. is preparing to complete No. 1 S. E. Drushell, a north offset to the discovery. Sand was cored at 2,665-72 feet, total depth, and 7-inch casing was cemented at 2,665 feet. On the West Ranch prospect, Magnolia Petroleum Co. No. 2-A West, completed last week as a dry gas well, began to show salt water and is being recompleted. It flowed 1,121,000 feet of gas last week from perforations at 5,085-89 feet.

Locations for two important tests on an old salt dome structure were made and material is being moved in. In Liberty County, Wallace Hargrove and others have derrick up for No. 1 J. C. League in the M. De Los Santos Coy Survey, while at Stratton Ridge, Brazoria County, Sterling Oil & Refining Co. is preparing to start a 5,000-foot test on the J. C. Kramer lease on the north flank in the T. W. Grayson Survey.

A slight south extension to the Hastings field, Brazoria County, was made by completion of Stanolind Oil & Gas Co. No. 7-C Moore. Completion was made at 6,000 feet and the well flowed 278 bbls. in 11 hours through a quarter-inch choke with tubing pressure 1,025 pounds.

On the north flank of the Orange field, Orange County, General Petroleum Corp. No. 2 State tested several stands of oil and 100 pounds of pressure on an eight-minute drill stem test at 4,094-4,111 feet, and is drilling for the discovery sand below 5,100 feet. This is the first time this sand section has been tested.

Humble Oil & Refining Co. is starting another interesting outpost test in the Friendswood field, Harris County. It is on the F. E. Gavin lease about 3,000 feet west of the company's No. 1 Houston Development Co. abandoned last week at 8,452 feet. The latter well failed to find saturation in the Frio sand, topped at 5,955 feet and was drilled to the Vicksburg formation topped at 8,360 feet.

The Clinton field, Harris County, was apparently extended 1,000 feet north as Stanolind Oil & Gas Co. No. 1 Paul Weaver started flowing wash water and oil after perforating casing at 3,735-45 feet. The hole was drilled to a total depth of 4,493 feet.

COMPLETIONS ON TEXAS COAST

Brazoria County

Danbury field: Shell Petroleum Corp. No. 5 Jameson, perforated casing 1,955-70 feet, 120 bbls., 12/64-inch choke. Hastings field: Humble Oil & Refining Co. No. 7 Alexander, sand 5,755-6,050 feet, 646 bbls., quarter-inch choke; Humble Oil & Refining Co. No. 10 W. G. McDeed, sand 5,992-6,050 feet, 617 bbls., quarter-inch choke; Stanolind Oil & Gas Co. No. 19-B H. H. Ford, perforated casing 5,375-5,442 feet, 493 bbls., quarter-inch choke; Stanolind Oil & Gas Co. No. 3 R. M. Froberg, sand 6,097-6,107 feet, 377 bbls., quarter-inch choke; Stanolind Oil & Gas Co. No. 4 R. M. Froberg, perforated casing 6,045-75 feet, 701 bbls., quarter-inch choke; Lockridge field: Gulf Oil Corp. No. 7-A Wilkes and Smith, perforated casing 6,364-67 feet, 173 bbls., 5/32-inch choke.

Chambers County

Anahuac field: Humble Oil & Refining Co. No. 1-X W. C. Tyrell, sand 7,095-7,108 feet, 372 bbls., quarter-inch choke.

Fort Bend County

Thompson field: Humble Oil & Refining Co. No. 17-X Lockwood, perforated casing 3,141-45 feet, 52 bbls., one-eighth inch choke.

Galveston County

Dickinson field: F. W. Bennett No. 1 Ripise, perforated casing 8,780-8,804 feet, 452 bbls., quarter-inch choke; Mid-States Petroleum Co. No. 1 Jones, perforated casing 8,960-90 feet, 803 bbls., quarter-inch choke. Hitchcock field: N. W. Hunter No. 1 Arco Oil Co., perforated casing 5,152-56 feet, 72 bbls., 5/64-inch choke.

Harris County

Fairbanks field: Amerada-Stanolind Oil & Gas Co. No. 2 Bullimore, perforated casing 6,843-52½ feet, 358 bbls., quarter-inch choke; Amerada-Stanolind Oil & Gas Co. No. 1 M. E. Cougat, perforated casing 6,844-52 feet, 488 bbls., quarter-inch choke; Gem Oil Co. No. 3 B. W. Reid, perforated casing 6,846-51 feet, 768 bbls., quarter-inch choke; Showers & Moncrief No. 1 Ley, perforated

(Continued on Page 91)

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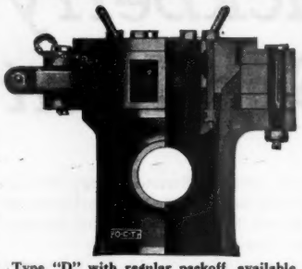

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Among the Drilling

ROWAN DRILLING CO. completed a small producer at the Danbury dome, Brazoria County, Texas, for itself. The well is on the Jameson lease. Other operations along the Gulf Coast district are reported at the Fairbanks field for Amerada Petroleum Corp. and at the Venice field, Plaquemines Parish, for Tide Water Associated Oil Co.

CRON & GRACEY are preparing to complete a deep test in the Gibson field, Terrebonne Parish, for Shell Petroleum Corp. The hole is bottomed in sand at 9,505 feet, and 7-inch casing was cemented at 9,485 feet.

BAUMAN & GILSTER of Shreveport, recently broke the drilling time record for the Jefferson-Lodi section of Rodessa. The well, contracted by Sam Killingsworth, was completed in an overall period of 26 days, and actual drilling time was only 17½ days. Rigging up required two and one-half days, cementing five days and bringing in the well one day. The producer is bottomed at 6,048 feet, producing from sand at 6,037. This approaches the record for all of Rodessa, set by Haynes Drilling Co. of Shreveport, which drilled a Caddo Parish well in 23½ days several months ago.

J. C. TIPPETT, Shreveport contractor, is drilling an important deep wildcat for Standard Oil Co. of Louisiana, in the Farmerville sector of Union Parish, Louisiana. The test, No. 1 Frost Lumber Co., was last reported drilling hard sandy shale below 9,886 feet. A show of gas was encountered several days ago at 9,731-37 feet. Another rig is active in the Village field of South Arkansas, drilling the second test in the newly opened pool, Standard Oil Co. No. 1 Crumpler, drilling below 5,000 feet.

SULTANA DRILLING CO., Shreveport, La., completed a deep Bodcaw producer for A. G. Oliphant, in the Cotton Valley field of Webster Parish, No. 2 Hodges, bottomed at 8,205 feet.

CROW DRILLING CO. has two rigs active in the Buckner field of Columbia County, South Arkansas, for the Standard Oil Co. of Louisiana. Both are edge wells, one being across the line in Lafayette County, where the chances for a possible extension will be known within a few days.

L. J. BODINE, of the Bodine Drilling Co., of Great Bend, Kans., has returned from a trip to Scotts Bluff, Neb., where the firm is to drill a 6,500-foot wildcat test for Houston Petroleum Corp., of Wichita. The derrick was finished on the test which is 65 miles from production in northern Kansas. The location is in the NE cor. section 15-22n-57w, some 14 miles southwest of Scotts Bluff. Crews from western Kansas will drill the test which is slated to go 2,500 feet with cable tools and the rest of the contract depth with rotary.

MANNING AND MARTIN, INC., drilling contractors of Denver and Tulsa, have been given a contract by California Co. to drill an important wildcat test on Dupuyer anticline in Teton County, Montana. Rotary tools will be used and oil is expected from 1,300 to 2,500 feet. It will be the first well drilled on the east face of the Rocky Mountains in the steep folding area. The Madison lime, principal producing horizon of the Turner Valley field, Canada, is the goal.

DRILLING & EXPLORATION CO. and Bell & Loffland Drilling Co. have together established a remarkable record in the Wilmington field of California. The two concerns have contracted all of the drilling on the extensive Wilmington and Long Beach holdings of Union Pacific Railroad Co. To date 100 wells have been completed and 6 more are being drilled. During this entire drilling campaign, which started in March, 1937, neither contractor drilled a dry hole, encountered a serious fishing job, or found it necessary to delay completion of a well. In drilling a total of about 375,000 feet, or 71 miles, this is indeed an accomplishment. Each contracting company has completed the same number of wells. Contracts were let through Hall-Baker Co., field operators for the railroad company.

LOFFLAND BROTHERS have another depth record for the Gulf Coast as drilling continues below 13,347 feet at Fohs Oil Co. No. 1 Bayou Baptiste, a wildcat in Terrebonne Parish, Coastal Louisiana. The well is about 20 miles east of the company's No. 1 Buckley-Bourg, drilled and completed by Loffland Brothers as the world's deepest producer. While No. 1 Bayou Baptiste is only 17 feet deeper than the discovery well, the hole is scheduled to be drilled much deeper. In the Cedar Point field in Galveston Bay, Standard Oil Co. of Texas No. 3 State has been spudded, and in Duval County, the company's No. 1 Garcia is drilling below 3,000 feet.

Several Gulf Coast drilling contractors who have taken farmed-out leases in the Hardin field, Liberty County, are being rewarded with producers. Glenn H. McCarthy completed No. 1 Oliver through perfo-

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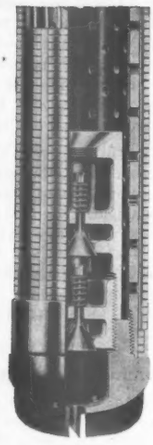

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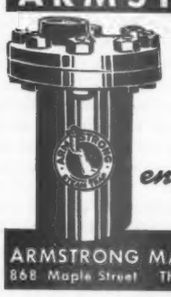

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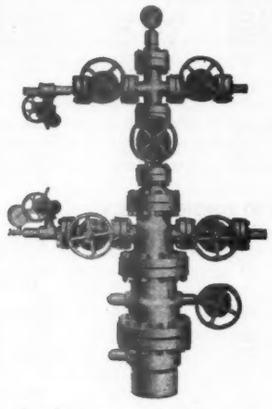

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rated casing at 7,630-48 feet, for an initial production of 9 bbls. per hour through a 9/64-inch choke. The well is in the south part of the North Hardin area and is expected to result in several offsets. In the West Hardin area, Smith & McDannald is bottomed at 7,614 feet and casing has been cemented for completion after oil sand was cored. In the same area, George Echols is nearing the sand at No. 1 J. H. Cessna. The expiration of leases in this field has resulted in a rather active drilling campaign which is expected to continue for several months as numerous proven locations remain to be drilled.

MITCHELL & SULLIVAN are engaged in drilling one of the more important wildcats in Gaines County, West Texas, C. B. Warr and Virgil E. Riddle No. 1 Brown, in section 26, Block "G," C.&M.R.R. Survey, about 8 miles southeast of the town of Seagraves. It is contracted to go to 5,700 feet unless sulfur or salt water or commercial production is encountered. It was last drilling below 3,672 feet.

H. O. GRACE was awarded a contract by J. W. McMillen for the drilling of three tests in the new Pardue oil pool, Haskell County, Texas, with the first well to be started by the end of the week. The first well will be a quarter mile south of the pool discovery, south half of the M. Collum Survey No. 4, while the other two will be in the J. F. Morgan Survey No. 59.

GIBSON & O'DONOHOE, Wichita Falls drilling contractors, have the honor of drilling the discovery well in the area opened by Continental Oil Co. and Petroleum Producing Co. on State Asylum lands 3 miles south of Wichita Falls, Tex. The well is producing an estimated 1,000 bbls. of oil from the Marble Falls formation of the Bend series and is bottomed at 5,129 feet, having encountered 53 feet of saturated sand.

GOLDING & COCHRAN AND CAIN, prominent in the development of the K.M.A. field of Wichita County, Texas, have brought in their second well on the D. R. Preston lands on the northwest side of the field. The well is flowing an estimated 500 bbls. of oil daily with total depth at 3,835 feet. Operators have made location for their No. 3 Preston, 600 feet northeast of No. 2.

BUTLER & HORNE, Dallas, Tex., contractors, opened a new producing horizon for the 14-year-old Noodle Creek field of Jones County, West and Central Texas, when the well they drilled for Humble Oil & Refining Co. on the Riley Horton lands made an estimated 23 bbls. of oil per hour from pay encountered from 2,929-32 feet. It is a southwest offset to Humble No. 1 Irwin, which opened the Fisher County portion of the field. The contractors have an interest in the well and the acreage.

AL BUCHANAN DRILLING CO., of San Antonio, Tex., has started drilling operations on a projected 12,000-foot wildcat in Calhoun County for Hiawatha Oil & Gas Co.

GLENN H. McCARTHY will move one of his rotaries to Matagorda County, Texas, where he will drill No. 1 Moffett for himself. The well is about 1½ miles northeast of the Palacios field. In the Katy gas field, Waller County, Stanolind Oil & Gas Co. No. 1 Fream is drilling below 10,600 feet. McCarthy No. 1 Crews, Live Oak County, has been abandoned.

LOFFLAND BROTHERS are preparing for a completion test on Fohs Oil Co. No. 1 Bayou Baptiste, the second deepest test in the world, south of Houma in Terrebonne Parish, coastal Louisiana. The hole was drilled to a total depth of 13,467 feet, and the first production test will be made above 11,000 feet. Drilling continues in Galveston Bay, and in Duval County for Standard Oil Co. of Texas.

SMITH & McDANNALD extended the Hardin field, Liberty County, Texas, a short distance southwest, with the completion of their first test which was drilled on farmed-out acreage. The well is on the Rives lease and will result in additional development for this particular part of the field.

ALLEN & MORRIS of San Antonio, Tex., received contract from the Seaboard Oil Corp. for No. 1 Lockett to be drilled in the Luby field, Nueces County, and drilling operations have been started for the same company on three additional wells, all in the same field. Other operations are reported at West Saxet for Rutherford Oil Corp. and at the Refugio field for W. R. R. Oil Co.

TRINITY DRILLERS, INC., of San Antonio, Tex., is drilling below 3,700 feet on W. G. Graf No. 1 Vaello, a wildcat northeast of the Driscoll field in Duval County. Other operations reported are Coastline Oil Corp. on No. 1 State, in Redfish Bay, Nueces County, and at the Midway field in San Patricio County for the Phillips Petroleum Co.

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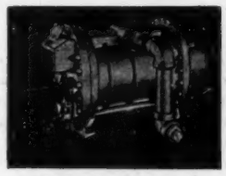

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California Field Report

By
L. P. STOCKMAN

Good Wells in Lower Zone, Lomita Section of Torrance

LOS ANGELES, Calif., July 11.—The Torrance field of Los Angeles Basin continues to occupy a prominent position due to aggressive deep zone exploitation in the Lomita section where a number of excellent wells have been completed during the past several weeks. The total of new wells and wells being deepened to the lower zone will exceed 50 within another week and there has not been any indication the saturation point has been even approached. Standard Oil Co. entered this week by making preparations to redrill and deepen No. 1-12 Marble which was bottomed in the upper zone several years ago at 3,820 feet. Texas Co. which has completed several wells in the lower zone should have No. 11 Wilson on production within a few days and will probably spud in No. 12 Wilson soon as the rig has been erected. Wilshire Oil Co. is another operator to enter the deep zone exploitation and its first venture will be an old well drilled and abandoned by Delano Oil & Investment Co. in Lot 3, Tract 588. A large number of wells headed to the deep zone are either old abandoned holes are wells that have been suspended for several years due to depletion. There are, of course, some new wells being started from the grass roots but for the most part the present program consists of deepening old holes.

Two new wells and two completions were added to the producing wells during the week and all registered favorable production. Silver Beach Oil Co. No. 1 Lomita was completed flowing 490 bbls. of 26.6-gravity from 3,998 feet and the company has already started preparations to drill another well in the area. Wilton Oil Co. No. 4 Torrance, a well started from the grass roots, has been completed flowing 312 bbls. of 26.8-gravity oil through a 24/64-inch bean. This producer was bottomed at 4,995 feet and finished with 150 feet of 4¾-inch liner including 130 feet of 110-mesh landed at 4,994 feet. A new rig for No. 5 Torrance has been completed and the crew from No. 4 is making preparations to rig up rotary drilling equipment. Chanslor Canfield Midway Oil Co., discoverer of the Torrance field, has recompleted No. 13 Torrance pumping 238 bbls. of 26.7-gravity oil in the deep zone at 4,989 feet. This well, a former upper zone producer, was finished several years ago but had declined to a few barrels per day. Deepening operations have increased the well's production and raised the gravity from about 15 degrees to 26.7 degrees which places current production in the light oil range. No. 13 Torrance has a solid string of 6⅝-inch casing landed at 4,984 feet and just before the production test was made the crew perforated at intervals between 4,821 feet and 4,963 feet and ran in 4,444 feet of 2½-inch tubing. Charleston Oil Co. No. 3 Lomita, a new well started from the grass roots, has been completed pumping 155 bbls. of 26.8-gravity oil from 5,001 feet after the hole had been finished with 142 feet of 5¾-inch liner including 112 feet of 100 mesh landed on bottom.

Long Beach

Hilldon Oil Co. has proved the Miocene productive in the flood control area west of the Los Cerritos section of the Long Beach field by completing No. 1 Dominguez flowing 951 bbls. of 24.8-gravity oil and 1,000,000 feet of gas from 7,786 feet. The well which is flowing through a 60/64-inch bean was finished with 7,737 feet of 7-inch and 55 feet of 4¾-inch liner including 45 feet of perforated landed on bottom. Production showed a tendency to slip off late in the week and there is a possibility it is sanding up. It started off making 200 bbls. per day when stimulated by the swab but got under way a few days later and continued to build up. It is a little too early to estimate the future importance of the deep zone in this area although the Miocene was picked up within a few hundred feet of where the company's geological department estimated the top. No decision has been reached whether the hole will be deepened another few hundred feet as this will be decided from a production standpoint. The upper zone, which is of Pliocene age, appears to be showing a high rate of decline and it is advantageous for Hilldon Oil Co. to make a conclusive test of the Miocene to make provision for future drilling.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	July 1		June 24			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Crude oil	.....	.....	69,611	9,516	272,750	.....
Diesel and gas oil	.....	.....	.....	.....	.....	176,726
Gasoline	109,840	15,691	.....	.....	1,579,203	1,906,912
Kerosene	.....	.....	.....	.....	199,453	250,642
Foreign exports—						
Crude oil	473,421	67,632	248,171	35,453	12,535,539	6,968,484
Fuel oil	342,994	48,999	96,553	13,793	4,461,659	7,428,138
Diesel and gas oil	55,149	7,893	80,334	11,476	2,931,385	3,832,120
Gasoline	122,433	17,490	274,723	39,246	3,594,243	3,820,035
Kerosene	3,464	495	.....	.....	578,111	1,100,606
Asphalt	.....	.....	.....	.....	15,564	.....
Other unfinished oil	.....	.....	.....	.....	.....	576,948
Coastwise-domestic—						
Crude oil	330,174	47,168	168,126	24,018	5,622,826	1,564,420
Fuel oil	284,513	40,645	134,140	19,163	5,415,344	7,351,696
Diesel and gas oil	13,498	1,928	57,324	8,189	891,905	1,102,778
Gasoline	294,626	42,089	458,247	65,464	7,642,690	7,239,235
Kerosene	2,903	415	.....	.....	140,734	147,622

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	.....	.....	.....	.....	178,662	152,932
Gasoline	.....	.....	.....	.....	9,499	25,778
Asphalt	.....	.....	.....	.....	346,862	205,319
Lubricants	.....	.....	.....	.....	13,665	12,857
Foreign exports—						
Crude oil	170,694	24,385	84,894	12,128	2,879,956	1,538,082
Fuel oil	.....	.....	.....	.....	1,060,946	1,075,516
Diesel and gas oil	48,512	6,930	79,801	11,400	1,156,390	1,551,976
Gasoline	213,922	30,560	537,278	76,754	3,152,549	2,729,656
Kerosene	1,011	144	9,428	1,347	449,603	471,545
Asphalt	.....	.....	.....	.....	56,258	.....
Lubricants	21,955	3,136	.....	.....	206,282	307,142
Coastwise-domestic—						
Fuel oil	90,216	12,888	83,160	11,880	3,238,413	3,262,267
Diesel and gas oil	35,287	5,041	36,914	5,273	770,821	460,693
Gasoline	99,811	14,259	159,623	22,803	3,119,607	2,279,771
Kerosene	.....	.....	.....	.....	281,609	84,935

Wilmington

Six new wells were completed in the Wilmington field during the week and a check indicates the probable completion of another relatively large group during the coming week. Included in these new wells scheduled for completion next week are two potential producers of Republic Petroleum Co., Macson Oil Co. No. 1-55-O, Hancock Oil Co. No. 10-B Harbor, No. 10 Southern Pacific of General Petroleum Corp. and perhaps two wells each by Richfield Oil Corp. and Union Pacific Railroad Co. None of the wells completed during the current week registered large production although all showed favorable production. Three were finished in the Ranger zone and three in the Terminal zone and while the aggregate of completions in the Terminal was higher than the total initial of wells completed in the Ranger zone, the largest producer was completed in the Ranger. Union Pacific Railroad Co. headed the list with two completions in the Terminal zone. The company's No. 9-E was completed flowing 920 bbls. of 27.2-gravity oil from 4,085 feet after the hole had been finished with an 8⅝-inch liner including 601 feet of perforations at intervals and 365 feet of 6⅝-inch liner including 147 feet of perforations. Union Pacific Railroad No. 2 P.D. was completed flowing 841 bbls. of 26.8-gravity oil from 4,130 feet. It was finished with a combination 8⅝-inch and 6⅝-inch which carried perforations opposite the upper and lower Terminal zone.

Richfield Oil Corp., which has been developing its holdings in the Wilmington field, completed No. 5 Pacific Dock this week flowing 1,350 bbls. of 19.9-gravity oil from 3,644 feet. It was finished with 1,057 feet of 8⅝-inch liner including perforations at 3,132-3,233 feet and at 3,549-3,644 feet and cemented through perforations at 3,124 feet and at 3,543 feet. Universal Consolidated Oil Co. completed No. 4 Newport flowing 792 bbls. 29.3-gravity oil through a 48/64-inch bean from a depth of 4,083 feet. This new well was finished with 1,687 feet of 8⅝-inch liner including 60-mesh perforations at 2,703-3,080 feet, 3,745-3,815 feet and at 3,905-4,078 feet and was cemented through perforations at 3,745 feet and at 3,905 feet. It tested wet on its first test but this was corrected by recementing through perforations at 3,905 feet. General Petroleum Corp., which is getting ready to start six new wells, completed No. 16 Harbor flowing 220 bbls. of 16.9-gravity oil from the Ranger zone at 2,940 feet. This well was finished with 680 feet of 5¾-inch liner including 386 feet of 50-mesh perforations landed at 2,935 feet and the hole was gravel packed before the production test. No. 16 Harbor was completed flowing through a 32/64-inch bean and showed a tubing pressure of 90 pounds and a casing pressure of 470 pounds. Allied Petroleum Corp. has completed No. 28 Harbor flowing 204 bbls. per day from the Ranger zone at 3,363 feet after the hole had been finished with 303 feet of 6⅝-inch liner including 283 feet of perforated landed at 3,361 feet and 3,161 feet of 2½-inch tubing.

Rio Bravo

The first real tangible evidence of the structural trend of the Rio Bravo field made its appearance during the week and if subsequent developments confirm these indications the field has only been scratched. Of paramount importance was the coring of the oil sand in Union Oil Co. No. 3-34 Kern County Land in section 34-28-25, at 11,215 feet. This is the most westerly well in the Rio Bravo field and is the highest point at which the top of the Rio Bravo zone has yet been cored. This development indicates that the top of the Rio Bravo structure is west and north of present drilling. In keeping with this development Superior Oil Co. has not yet cored top of the Rio Bravo zone in No. 1 Helbling in section 1-29-25, despite the bit has reached 11,710 feet. No. 1 Helbling is the most southeasterly well and while it may still result in commercial production it proves the structure is dipping rather abruptly to the southeast. Early in the week Superior Oil Co. completed

(Continued on Page 82)

Oklahoma Operations

By DAL DALRYMPLE

Find Gas in Garvin Wildcat; Test Kay County Discovery

Wildcats in Kay and Garvin counties provided the outstanding developments in Oklahoma fields the past week, one opening a new Wilcox sand oil producing area and the other finding a dry gas pool.

The Kay County discovery, Helmerich & Payne, Inc. and Ohio Oil Co. No. 1 State School Land, SW SE SW section 16-28-1w, southeast of Braman, was shut in for tankage after flowing about 350 bbls. of 41.5-gravity oil in four hours. In the last 30 minutes of the test it flowed 51 bbls. of oil against 85 pounds back pressure. Shut-in pressure was 350 pounds. Volume of gas was estimated at 3,000,000 feet. Top of first Wilcox sand was 3,530 feet; second sand was found at 3,603-45 feet, total depth. Five-inch casing was set at 3,610 feet.

Three offset tests have been started. Helmerich & Payne and Ohio Oil Co. No. 1 Wilburl, NW NE NW section 21-28-1w, is the south offset; same operators' No. 2 Wilburl, NE NW NW section 21, is the southwest offset, and Tide Water Associated Oil Co. No. 1 State, SE SW SW section 16, is the west offset. Helmerich & Payne assembled the block and recently sold half-interest in 480 acres of the leases to Ohio Oil Co. The Tide Water Associated company bought the W half SW section 16 from Helmerich & Payne when the initial well was started.

Interest in southern Oklahoma operations centered at the Garvin County gas discovery, H. R. Hollenbach and others No. 1 Butterly, NE NE SE section 22-1n-1e, northwest of the town of Davis, across the line in Murray County. It gauged 5,000,000 feet of dry gas at 2,730 feet, total depth. It had gas from 2,726-30 feet, where gas broke through to clean the hole. Contract depth is 5,100 feet and operators were expected to set casing and deepen. Location is on a 2,100-acre block. This is the second gas strike near Davis in recent weeks, the first being the Gilbreath & Dutton No. 1 Wolfe, SE SE SW section 8-1n-2e, a few miles north of Davis and in Murray County. It gauged more than 36,000,000 feet of gas through perforations in casing at 2,227-86 feet, when completed in May.

Work had started at a second test in the new Wilcox sand pool opened at Sinclair Prairie Oil Co. No. 1 Crews, SW SW NE section 27-16-1e, in eastern Logan County. It is Gulf Oil Corp. No. 1 Henderson, SE SE NW section 27-16-1e, a west offset. The discovery well was shut in for pipe line connections. It had potential of 1,080 bbls. of oil from sand at 5,233 feet, plugged back depth.

Pottawatomie County

Five producers were completed the past week in the revived St. Louis field of Pottawatomie County. Magnolia Petroleum Co. No. 2 Tull-Fyke C, SE cor. section 20-7-5. had Calvin sand at 2,840-51 feet, total depth, and flowed 165 bbls. of oil through tubing in 24 hours.

J. F. Smith No. 1 Tarter, NE SW SW section 32-7-5, pumped 110 bbls. of oil in 24 hours after plugging back from 4,090 feet, total depth, to 4,015 feet and acidizing. Viola lime was topped at 3,950 feet, and production was from Viola and Simpson pay at 3,993-4,015 feet.

Hall & Briscoe No. 1-A Coleman, SW NW NW section 33-7-5, topped Dolomite at 4,032 feet, total depth 4,051 feet, plugged back to 4,042 feet, acidized and pumped 942 bbls. of oil and 1,400 bbls. of water in 24 hours.

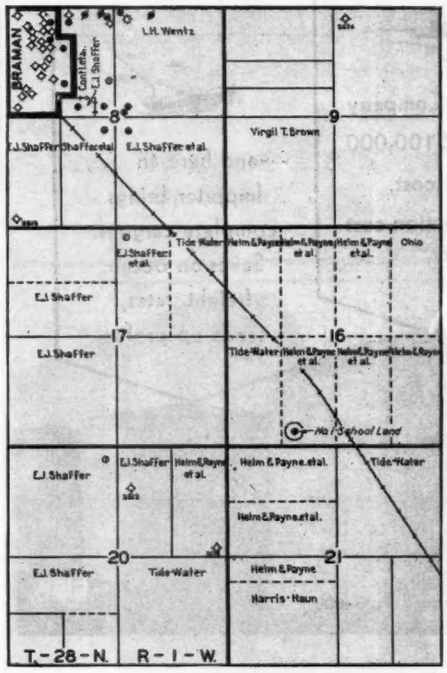
J. F. Smith and others No. 1-A Brown, NE NE SE section 21-7-4, pumped 75 bbls. of oil and 60 bbls. of water in 24 hours from Calvin sand at 3,190-95 feet, total depth.

Magnolia Petroleum Co. No. 5 Hilton, SE NW NW section 22-7-4, had Calvin sand at 3,160-82 feet, total depth, and flowed 90 bbls. of oil in 24 hours, with 15,000,000 feet of gas.

Phillips Petroleum Co. No. 4 Pappan, SE cor. section 16-7-4, was temporarily abandoned at 3,548 feet, total depth.

J. F. Smith and others No. 1 Henderson, NW NW NE section 4-5-3e, wildcat southwest of the West Asher pool, found Wilcox sand at 4,249 feet and was dry and abandoned at 4,263 feet, total depth.

New work in Pottawatomie County: Burns & Hightower No. 1 Dean, NE SE SE section 13-6-3e, Asher pool, rig; Elbar Oil Corp. No. 1 Douglas, NE SE NW section 10-7-4, St. Louis field, rig; J. F. Smith No. 1 Harris, NW NW SW section 22-7-4, location; same operator's No. 3 Hines, SE SE NE section 21-7-4, rig;



Mid-Continent Map Co., Tulsa

Three tests have been started offsetting the Wilcox sand discovery well in section 16-28-1w, Kay County

same operator's No. 4 Hines, SW SW NW section 22-7-4, location; Magnolia Petroleum Co. No. 4 Billington, C N half NE SW SW section 36-7-4, cellar and pits; same company's No. 2 Tull-Fyke A, NE cor. section 29-7-5, building rig; same company's No. 3 Tull-Fyke A, NW cor. section 28-7-5, rig; Alma Oil Co. No. 2 Smith, NE SE NE section 32-7-5, location; Hall & Briscoe No. 1 Smith, SE NE NE section 32-7-5, rig; Alma Oil Co. No. 3 Curley, NW SW NW section 33-7-5, rig; same company's No. 4 Curley, NE SW NW section 33-7-5, location.

Pontotoc County

Sinclair Prairie Oil Co. No. 2-B Starrett, SE NW NE section 21-5-5, Beebe pool, Pontotoc County, had Viola lime at 2,490-2,500 feet, total depth 2,545 feet, was acidized and swabbed and flowed 187 bbls. of oil in 24 hours.

Morrison & Lovelace No. 2 Kroeger, NE NW SE section 25-5-6, West Francis pool, had gas sand at 1,665-80 feet, total depth, and was estimated good for 12,000,000 feet of gas, completed.

W. A. Delaney and others No. 2 Starrett, NW SE NE section 21-5-5, pumped 400 bbls. of oil and 125 bbls. of water in 24 hours after treating with acid. It had Viola lime at 2,518-95 feet, total depth 2,665 feet, and plugged back to 2,595 feet.

Four old wells in the Fitts field were recompleted. Stanolind Oil & Gas Co. No. 1 Norris A, SE NE SE section 26-2n-6, was deepened from 4,327 feet to Simpson pay at 4,378-4,405 feet, total depth, and pumped 125 bbls. of oil in 22 hours.

Sinclair Prairie Oil Co. No. 3 Vivian, NW SW NW section 22-2n-7, pumped 20 bbls. of oil in 24 hours after deepening from 3,809 feet to 3,834 feet and acidizing.

E. H. Moore No. 1 Frazier, NE SW NW section 23-2n-7, was plugged back from 3,859 feet to 1,336 feet, and shot and pumped 24 bbls. of oil daily.

Magnolia Petroleum Co. No. 16 Hardin, NW NE NW section 30-2n-7, was plugged back from 3,911 feet to 1,550 feet, and was dry and abandoned.

Four new operations in Pontotoc County were announced. Pierse & Moran No. 1 Kroeger, SE NE SW section 30-5-7, wildcat, was a rig. W. A. Delaney No. 4-A Horn, SE NE NE section 22-2n-7, was a machine. Simpson & Roodhouse No. 3 Illinois Life, NE NW NW section 28-2n-6, was a location. Osborn & Hembree No. 1-A Chism, SW NE SE section 34-5-7, was moving in material.

Seminole County

Wood Oil Co. No. 1 Born, NW SE NE section 2-8-6, Seminole County, topped Wilcox sand at 4,102 feet, total depth 4,123 feet in sand, and pumped 204 bbls. of oil in 24 hours.

J. F. Smith and others No. 1 Millsap, SW SE SW section 23-7-5, had Boggy sand at 2,952-75 feet, total depth 3,116 feet, plugged back to 2,970 feet, ripped casing, shot and flowed 223 bbls. of oil through casing in 24 hours.

Troup & Moore No. 1 Sanders, NW SE SW section 27-6-5, swabbed and flowed 150 bbls. of oil in 24 hours at 2,691 feet, total depth. It later flowed 114 bbls. of oil in 24 hours. Production was from Boggy sand at 2,672-91 feet.

Bryan Petroleum Co. No. 1 Ward, SW NW NW section 3-6-6, was dry and abandoned at 2,893 feet, total depth.

Dave Malarnee and others No. 1 Flowers, SE SW SW section 29-7-6, an old well in the Little River area, was plugged back from 4,723 feet to 2,965 feet, then deepened to 3,010 feet, was shot in Boggy pay and pumped 7 bbls. of oil and 100 bbls. of water in 24 hours, recompleted.

Gilcrease Oil & Gas Co. No. 3 East Reed, NW NW NE section 18-5-8, Allen area, was a cellar. W. B. Pine No. 7-A Williams, SW NW NE section 22-6-6, Traugh pool, was drilling below 640 feet. Rogers & Rogers No. 1 Coker, SE SW SE section 26-7-5, was rigging up rotary.

Oklahoma County

One producer was completed in the Oklahoma City field at Clark & Co. No. 2 State, SE SE NE section 16-12-3w, Oklahoma County. It had Simpson pay at 6,435 feet, was bottomed at 6,578 feet, was acidized and flowed 779 bbls. of oil in 10 hours through casing. It later flowed 433 bbls. of oil through tubing in 24 hours, cutting 12 per cent.

Okmulgee County

W. W. Grandfield No. 8 Anderson, NE NE SE section 8-14-15, Okmulgee County, was completed as a 2-bbl. pumper in sand at 1,166-84 feet, total depth.

Jake Steighner No. 4-A Nash, C E half NE section

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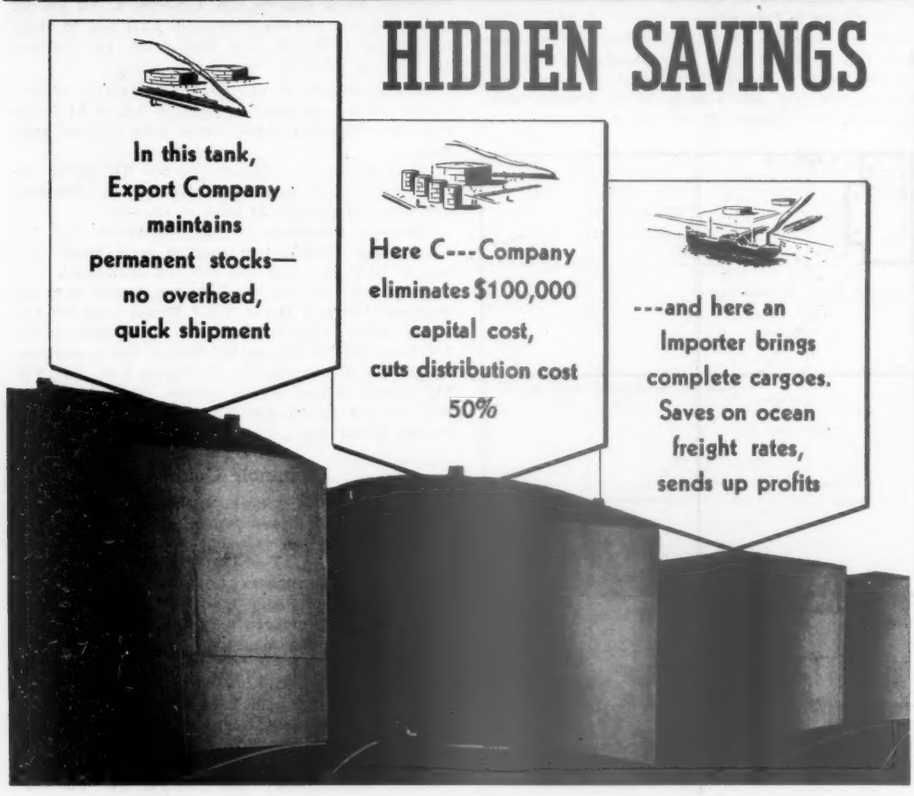
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14-14-14, was dry and abandoned at 1,153 feet, total depth.

Oklahoma Oil, Inc. No. 2 Wells, SE SW NE section 7-14-11, was a location. W. B. Pine No. 3 Brinton, NE SW NE section 4-14-12, was a location. M. E. Craig No. 1-A J. Lewis Allotment, SE SE NW section 25-14-14, was drilling below 750 feet.

Okfuskee County

W. A. Fleming No. 2-A Fike, SE NE NW section 7-10-12, Weleetka area, Okfuskee County, produced 3,000,000 feet of gas and was completed at 973 feet, total depth.

Muskogee County

J. M. Feltz No. 1 Rowsey, NE NW SE section 9-15-18, Muskogee County, was dry and abandoned at 1,043 feet, total depth.

M. S. Musellem No. 5 Evans, NE SE SW section 32-14-19, was a location.

Estimated Daily Production

Estimated daily production for Oklahoma for the week ending July 9 and for the preceding week was as follows:

	Barrels	
	July 9	July 2
Allen	6,025	5,975
Billings	4,225	3,225
Burbank	7,500	5,750
South Burbank	10,225	9,500
Balance Osage	17,800	14,750
Blackwell district	4,500	3,925
Bristow-Slick	7,125	4,675
Chandler	1,750	1,625
Crescent	3,825	3,900
Cromwell	3,225	2,625
Cushing-Shamrock	10,750	7,425
Duncan district	3,700	3,425
Edmond	5,125	5,900
Fish	3,025	3,150
Fitts	38,700	39,175
Jesse	2,825	2,725
Graham	4,500	3,775
Gray	900	925
Healdton	9,250	7,875
Hewitt	4,025	3,250
Keokuk	3,650	3,525
Konawa	1,275	1,350
Lucien	7,550	7,250
Moore	4,050	4,175
Oklahoma City	113,000	73,450
Olympic	5,475	5,150
Ramsey	1,250	1,450
Sasakwa	1,625	1,325
Sholem-Alechem	2,875	2,325
Seminole district:		
Bowlegs	7,150	8,125
Carr City	2,675	3,475
Dora	5,500	4,725
Earlsboro	4,200	4,550
South Earlsboro	475	525
East Earlsboro	4,400	4,650
Little River	6,425	7,050
East Little River	800	875
Maud	600	650
Mission	1,275	1,450
Seminole	6,400	7,125
East Seminole	1,750	1,375
Searight	2,200	2,775
Total Seminole	43,850	47,350
St. Louis-Pearson	20,500	18,725
Tatums	3,750	2,850
Tonkawa-Garber-Thomas	4,325	3,950
Wewoka	2,275	1,950
Yale-Jennings	3,825	3,175
Other pools	75,000	65,000
Total Oklahoma	443,275	376,575

Hughes County

B. H. Harrison and others No. 3 Ed Cox, NE NE NW section 21-9-9, Hughes County, had sand at 495-512 feet, total depth, and produced 750,000 feet of gas.

Same operators' No. 2 Cox, NE NE NW section 21-9-9, had only a slight showing of gas and was dry and abandoned at 528 feet, total depth.

Same operators' No. 1 P. Cox, SE SE SW section 16-9-9, had a hole full of water and was abandoned at 520 feet, total depth.

Garvin County

Cox & Hamon No. 1 Craig, NW SW SW section 29-1n-3w, Tussy pool, Garvin County, was an abandoned location, but may be drilled later.

Same operators' No. 2 Pate, SW SE SW section 29-1n-3w, was drilling below 952 feet.

Carter County

Texas Co. No. 1 Cathey, SE NE NE section 6-5s-1w, an old wildcat southeast of the Hewitt field in Carter County, was recompleted as a 10-bbl. pumper after plugging back from 5,685 feet, total depth, to 5,477 feet. Originally, it was bottomed at 4,559 feet, where it was completed as a small producer, but operators began deepening last March in an effort to increase oil yield.

Shell Petroleum Corp. No. 22 Johnson, NW SE SW section 4-4s-3w, Healdton field, Carter County, was bottomed at 1,091 feet, plugged back to 1,034 feet,

and pumped 26 bbls. of oil in the first 12 hours from Deese sand at 1,020-34 feet.

Sinclair Prairie Oil Co. No. 31 Million & Thomas, SE cor. section 5-4s-3w, was dry and abandoned at 1,039 feet, total depth.

Gulf Oil Corp. No. 3 Berry, SE NE NW section 5-1s-3w, Tussy area, was dry and abandoned at 3,600 feet, total depth.

New operations in Carter County: Sam Kripps and others No. 1 Pierce, NE NW NE section 22-2s-2w, Ed Cox pool, machine; Ed Sanders No. 1 Majors, SE SW SE section 22-2s-2w, an old well being deepened, fishing for liner. Gulf Oil Corp. No. 1 Empire-Franklin, C SE SE section 27-2s-3w, derrick; Magnolia Petroleum Co. No. 5 Thompson, NE NE NW section 9-4s-3w, location.

Caddo County

Ray Stephens, Inc. No. 1 Thompson, SW SE NW section 27-6-10w, Cement field, Caddo County, was bottomed at 5,505 feet, perforated casing at 4,925-57 feet, flowing 55 bbls. of oil daily on gas lift through tubing. Production was from Deese formation.

Magnolia Petroleum Co. No. 5 well, NE NE NW NW

(Continued on Page 84)

Eastern Fields

(Continued from Page 62)

In Poca district, Joe Rubin topped the Corniferous at 4,801 feet in the Carney heirs test, and is on top of the sand. Liosag Fuel Co. reached the Corniferous at 4,875 feet in the H. C. Matthews test. Phillip K. Harness topped that formation at 4,640 feet in the Lena K. Snodgrass test.

Columbian Carbon Co. is down 4,818 feet in No. 1 Boyd Castro; 3,490 feet in the Johnson & Gibson test; 1,450 feet in the L. P. Rollins test; 1,095 feet in the Lena Castro test, all in Poca district. West Virginia Gas Corp. has reached 1,568 feet in the Spencer-Canterbury test and spudded in the Fisher-Newhouse test.

Spartan Gas Co. is down 1,955 feet in the R. B. and Fred Baldwin test. Poca Fork Oil & Gas Co. is drilling at 1,855 feet in the Levi Combs test in Poca district.

United Fuel Gas Co. is drilling at 1,345 feet in the W. J. Glass and others No. 4787; at 2,025 feet in the I. W. Cavender No. 2025; at 1,645 feet in the W. J. Glass No. 4791; at 3,809 feet in the W. A. Fisher and others No. 4793; at 220 feet in the T. F. Good and others No. 4797; at 290 feet in the Floto Johnson No. 4801; at 847 feet in the Lillie Dawson and others No. 4803.

Deep Tests

In Jackson County, Cunningham Gas Co. topped the Corniferous lime at 4,772 feet on the E. F. Cunningham farm in Ripley district and is drilling at 4,845 feet. In Ravenswood district, Joe Rubin is down 3,185 feet on the W. J. Brown farm. In Washington district, United Carbon Co. has reached 2,032 feet on the Elizabeth Ward Perkins farm.

In Pleasants County, Columbian Carbon Co. on the Hammat farm in Grant district is drilling at 2,132 feet.

New Work

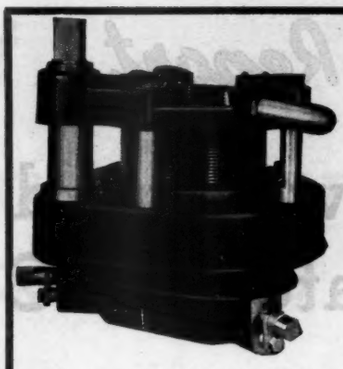
In Cabell County, Thermal Gas Co. is rigging up on the O. C. Porter farm in Grant district, elevation 572 feet. In Boone County, Pure Oil Co. has a location for No. 290 Williams Coal Co. in Sherman district, elevation 1,341 feet.

In Clay County, Virginia Gasoline & Oil Co. has a location for No. 134 (V1267) on the Brown, Goshorn & Swann lease in Henry district. Boggess & Boggess are drilling at 1,050 feet on the Thomas and others lease. In Otter district, Burton, Yoak and others are down 1,313 feet in the Rosanna W. Lambey test; Yoak, Preston and others, 1,592 feet in the V. J. Croikshanks test.

In Logan County, Hope Natural Gas Co. has a location on the Lawson heirs tract in Logan district, elevation 793 feet. Boone County Coal Corp. is down 875 feet on their own property.

In Ritchie County, Clem S. Morris has a location on the W. B. Cunningham farm, Murphy district, elevation 742.6 feet. In Roane County, American Oil Development Co. has a location for No. 5 J. F. Conley in Harper district, elevation 996.77 feet. Harry M. Boggs will drill a second test on the J. B. McQuain farm in Geary district, elevation 1,011 feet.

In Wayne County, R. H. Adkins is drilling on the J. C. Fraley farm in Union district, elevation 758 feet. In Wetzel County, Carnegie Natural Gas Co. has a location on the Dora C. Simmons farm in Proctor district, elevation 1,395 feet. In Wirt County, W. C. Patterson has a location for No. 1 W. C. Patterson, Clay district, elevation 965 feet.



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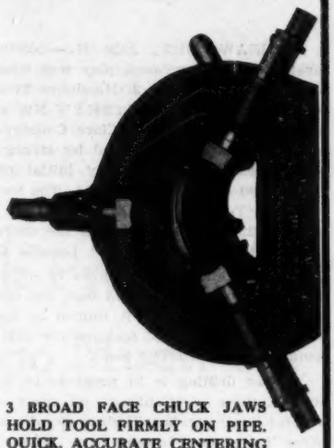

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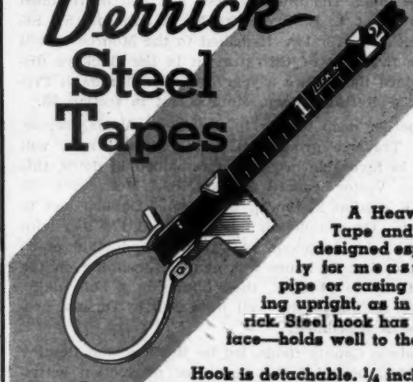

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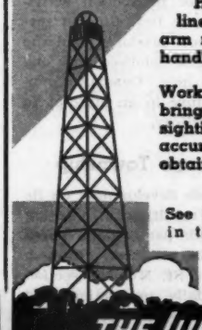

See Lufkin Page in the Petroleum Register and the Composite Catalog.

SEND FOR CATALOG NO. 12

THE LUFKIN RULE CO.
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Michigan Field Report

By
O. C. PRESSPRICH

Northwestward Trend of Oil Indicated in Clare County

SAGINAW, Mich., July 11. — Northwestward extension of Michigan's oil play was strongly indicated late Saturday when S. J. Higelmire Trust No. 1 A. E. Vanhorn, a wildcat test in SE SW NW section 3, Freeman Township (18n-6w), Clare County, came in with a heavy flow of oil, backed by strong gas pressure, with indications of probably initial natural production of 500 bbls. or more daily. The well is 3½ miles south of Temple, 17 miles northwest of Clare, and between 25 and 30 miles from the nearest oil production in the northern part of Isabella County.

The test encountered shows of oil and gas in the Traverse limestone at 3,378 feet, but continued to the Dundee-Monroe, which it topped at 3,991 feet. The pay was found at 3,993 feet and the well was bottomed temporarily at 3,994½ feet.

Deeper drilling is in progress or in prospect for at least three of Michigan's oil areas, with operators hopeful lower strata will show greater oil yields. The three areas now experiencing deep tests are the Jerome area in Midland County, the prolific Buckeye region of Gladwin County and the Adams pool in Arenac County.

The Jerome district has proved dry in the Dundee formation, hence experimentation with a test to the Monroe limestone. In the Buckeye section the deep tests are to go to the Monroe, in the hope it may prove as productive as the Dundee, which has made Buckeye the greatest of the Michigan fields. In the Adams-Arenac region the drills are pushing down to the Dundee in the hope of supplementing mediocre production from the Traverse limestone, which constantly confronts trouble from water.

An interesting deep test is under way in the Jerome-Midland area, where Sun Oil Co. encountered slight shows of oil and gas below 4,668 feet, in the Monroe lime. The Buckeye deep test will be resumed this week at L. L. Ovenshire No. 1 Johnson, SE SE NE section 23-18n-1w. If drilled to the Monroe it will be the first test of this stratum in the Buckeye district since the failure a year ago of a Mammoth Producing & Refining Corp. Monroe test in section 25.

Whether deep testing in the Adams-Arenac sector, where Traverse production is the general rule, will result in favorable production remained in doubt this week at Vestor-Leonard Oil Co. No. 1 McTaggart, SE SW NE section 26-19n-3e, the second Dundee test in the area. On completion the well filled 175 feet with oil, and acid treatment was given. Production of 35 bbls. the first 24 hours was gauged, declining on the second day to 11 bbls., then falling to 2 bbls. daily. Further testing of the well in search of Dundee production is scheduled.

Gladwin County fields, led by Buckeye and Bentley townships, occupied the center of production activities. Edenville was inactive for the first time in several weeks, failing to record a new producer, and the Allegan fields, highly active recently, showed only one completed producer and one dry hole. Ogemaw County had one producer, plus a failure in an attempt to extend the field in wildcat territory.

Gladwin County—Buckeye Township

Sun Oil Co. continued favorable development on its Strohkirch lease in section 9, resulting in pushing exploration westerly in the south part of the north (Wicklund) pool. Two commercial producers resulted. They are the No. 2-B Strohkirch, SE NW NE section 9-18-1w, acidized to 75 bbls. daily production, and the No. 9 Strohkirch, SW NE NE section 9, a 60-bbl. producer after acid. The continued favorable development of the western edge of production in north Buckeye is looked upon to encourage further extensions. No. 2-B Strohkirch was plugged back to 3,662 feet after passing through the pay zone, and was acidized. Victory Petroleum Corp. No. 2 Maier, NW SE NW section 35, was completed dry at 3,691 feet to provide one of the exceptions to the rule for Buckeye. The test was an attempt to push production westward in the extreme south part of the south (Oard) pool. A possible Monroe test was indicated for the midway Buckeye field this week with resumption of drilling at L. L. Ovenshire No. 1 Johnson, SE SE NE section 23. The test was shut down for some time at 3,700 feet. After passing two separate Dundee pay zones—both small—drillers reported only three bailers of Dundee water in 10 hours, considered a favorable indication for deeper testing. It is the first indicated deep test in the area in a year.

Bentley Township

Bentley took the lead for new production added in Gladwin County fields, with three producers, all rated average or above. Drilling has continued active in Bentley, where producers, although never sensational in comparison with Buckeye, nevertheless have been commercially productive. Stork Oil Co. No. 3 Smart, SW NW NE section 29-17n-2e, drew production honors of the week for Michigan fields with 140 bbls. daily after acid. It is the largest producer in the Bentley field in several weeks, and ranks with the best in the field. Gulf Oil Corp. No. 3 State, NE NE SW section 20, acidized a small natural flow to a 60-bbl. daily producer, and Pyramid Oil Co. No. 4 Lake, NW NE SE section 20, gauged 35 bbls. daily after acid treatment. All new producers for the week in Bentley are in the west central part of the township.

Billings Township

T. F. Caldwell No. 1 Flynn, NW NE SW section 4-17n-1e, first wildcat attempt in Billings in several weeks, was acid treated to a production of 12 bbls. for 24 hours, and was scheduled for a second treatment in an attempt to increase production. The test bottomed at 3,646 feet.

Allegan County—Monterey Township

Allegan fields slumped to almost nil in new producers after topping state fields for several weeks consecutively. One producer was added, Rex Oil & Gas Co. No. 1 Commons, SE SW SE section 8-3n-13w, 60 bbls. after acid. Several tests in the Monterey area are nearing the pay zone.

Dorr Township

M. L. Jorgensen No. 1 Wisnieski, NE NE NE section 32-4n-12w, was completed dry last week. A small show was encountered, but lacked commercial possibilities. The test bottomed at 1,650 feet.

Ogemaw County—West Branch Township

One of the best producers in the West Branch field in recent weeks was tapped at Muskegon Development Co. No. 3 Barber, SW SE NW section 28-22n-2e, Michigan's most northerly field, where an average natural flow was acidized to 100 bbls. daily. The test bottomed at 2,726 feet.

Horton Township

The wildcat test of Pirozzine, Gordon & Rolando No. 1 Ogemaw Land Co., SW SW NW section 13-21n-2e, was abandoned last week at 170 feet, due to unfavorable formation showings.

Arenac County—Adams Township

Drilling activity centered in Arenac around a prospective new Dundee limestone pool, heretofore with one exception untested in this locality. Traverse production dominates the area, with the first Dundee producer brought in by Pure Oil Co. recently. Vestor-Leonard Oil Co. No. 1 McTaggart, SE SW NE section 26-19n-3e, tapped Dundee production last week in small amounts. From an acidized production of 35 bbls. daily the test declined to 2 bbls. and was scheduled for further treatment and testing. The McTaggart test is on a tract adjoining Pure's Dundee producer, first in the field.

Midland County—Edenville Township

Edenville, the question mark field in Michigan, showed little activity for the week. No producers were added, and only one test was scheduled to strike the pay zone soon. It was McClanahan Oil Co. No. 1 Raymond, NW SE SE section 27-16n-1w, due to reach the Dundee late this week.

Jerome Township

Continued testing was reported at Sun Oil Co. No. 1-B State-Jerome, SW SW NE section 9-15n-1w, about 3 miles south and slightly west of proved Edenville territory. The test is the first in the area scheduled to probe the Monroe formation for commercial production. Operators ran tubing to 4,659 feet and after the first swab agitation 1 bbl. of oil was ejected. Only a small amount of water was reported, which was swabbed. A pumping test is planned by officials to test the hole further. Sun's other deep test in the Detroit River series (Monroe) at its No. 3-A State-Jerome location, half a mile north of the deep test, is shut down at 3,888 feet awaiting results of testing at the No. 1-B.

Porter Township

Rex Oil & Gas Co. abandoned its location for No. 3-B Howland, NW NE SW section 23-13n-1w.

Clare County—Lincoln Township

Deep oil testing in proved gas territory was launched here again last week at Gulf Refining Corp. No. 1 Ann Arbor Railroad, section 21, which succeeded in killing a 21,000,000-foot gasser to continue drilling for oil. The gasser was the largest tapped in the Clare area to date, and was the second tapped by Gulf in the area since spring. A 14,000,000-foot gasser was saved last spring in Grant Township to prove another Michigan gas field. Rock pressure was reported low at the latest Gulf gasser, resulting in decision to probe for oil. The test will be continued to the Dundee-Monroe formation.

Isabella County—Sherman Township

Pure Oil Co. No. 7 Latham, SW NE SE section 33-15n-6w, was brought in as a 65-bbl. natural producer, and is scheduled for treatment. The test is surrounded by producers rating much higher than the initial natural flow of No. 7 Latham.

Wise Township

Southern extension of the Clare gas field was indicated as blockaded last week with a failure recorded at James A. Peirce No. 1 Smart-Arnold, C W half SW section 5, found dry in the Michigan "stray" sand.

Gratiot County—Pine River Township

Gratiot County's wildcat deep oil test on the outskirts of St. Louis was scheduled to test the Dundee limestone this week. The test is Michigan Chemical Co. No. 9 fee, SE SW NW section 24-12n-3w.

Central West

By STAFF CORRESPONDENT

Marion County's New Pool; Good Wells in Olney Field

CENTRALIA, Ill., July 11.—The Centralia field easily led in completions in the past week with a total of 22 new oil wells, averaging 210 bbls. per well. A 1,500-bbl. well in eastern Richland County, and the opening of a new pool east of Centralia by the Texas Co. were outstanding features of the week.

Completions

Completions of the week with their sand records and initial production were as follows:

In Clinton County, Centralia field, Shell Petroleum Corp. No. 5 Allison, NW NW SE section 12-1n-1w, Bethel sand at 1,368-77 feet, 66 bbls. of oil and 24 bbls. of water; Shell No. 1 Dunbar, SE SW NW section 12-1n-1w, Bethel at 1,355-68 feet, 53 bbls. of oil and 24 bbls. of water; Adams Oil & Gas Co. No. 3 Buehler, 325 feet from S and 200 from E lines of SE quarter section 13-1n-1w, Bethel sand at 1,354-81 feet, 176 bbls.; Bailey & Lucas No. 2 Kuhn, 1,200 feet from N and 60 from E lines of SE quarter section 13-1n-1w, Benoist sand at 1,331 feet, total depth 1,367 feet, shot with 10 quarts, estimated at 350 bbls.; Bell, Riley & Lacey No. 1 Saggon, 1,280 feet from S and 560 from E lines SE quarter section 13-1n-1w, Benoist at 1,349-69 feet, estimated at 250 bbls.; Rufus K. Blowers No. 5 Fairview Park, 160 feet from N and 225 from W lines of NE quarter section 13-1n-1w, Bethel at 1,363-83 feet, shot with 60 quarts, estimated at 100 bbls.; Rufus Blowers No. 6 Fairview Park, 225 feet from N and 20 from E lines of NW quarter section 13-1n-1w, Bethel at 1,369-86 feet, shot with 50 quarts, 145 bbls. of oil and 5 bbls. of water; Jim Bond No. 1 Struchmeyer, Lot 3, Block 2, Pullen subdivision, section 13-1n-1w, shot with 15 quarts at 1,357-69 feet, estimated at 250 bbls.; John Pugh No. 1 Hoeinghaus, NE SW SE section 13-1n-1w, Benoist at 1,362-71 feet, shot with 5 quarts, estimated at 84 bbls.; John Pugh No. 1 Wehmer, 1,025 feet from S and 225 from W lines SE quarter section 13-1n-1w, dry and abandoned at 1,594 feet, Roseclaire formation was topped at 1,535 feet, upper sands were barren; Adams Oil & Gas Co. No. 2 Buehler, 50 feet from N and 555 feet from E lines of NE quarter section 24-1n-1w, Bethel at 1,357-83 feet, pumped 64 bbls.

Fritzie Oil & Gas Co. No. 2 Hesser, Lot 3, Block 1, Pullen Heights, Bethel at 1,371-81 feet, 250 bbls; E. C. Lehman No. 1 Bierman, Lot 12, Block 1, Finney Heights, section 24-1n-1w, Bethel topped at 1,368 feet, shot with 10 quarts, 160 bbls. of oil and 42 bbls. of water; Lehman No. 3 Bierman, Lot 15, Block 1, Finney Heights, section 24-1n-1w, location abandoned; Parish, Keller & Morgan No. 1 Khnolom, Lot 14, Block 3, Finney Heights, section 24-1n-1w, Bethel at 1,367-85 feet, estimated at 300 bbls.; O. L. Ray and A. A. Eason No. 1 Home Building & Loan, Lot 4, Block 3, Finney Heights, section 24-1n-1w, Bethel at 1,371-85 feet, shot with 10 quarts, estimated at 280 bbls.; Renner & Graham No. 1 Rexford, Lot 4, Block 4, Finney Heights, section 24-1n-1w, Bethel at 1,368-83½ feet, estimated at 300 bbls.

Marion County

In the Marion County side of the Centralia field, Cole & Simmel No. 1 Schrader, Lot 3, Block 4, original townsite, section 18-1n-1e, Bethel sand at 1,363-85 feet, shot with 10 quarts, 170 bbls.; J. W. Menhall & Co. No. 1 Illinois Central Railroad, 1,700 feet from S and W lines section 18-1n-1e, Bethel sand at 1,356-75 feet, shot with 10 quarts, 405 bbls.; Paul Doran No. 1 Kalberkamp, Lot 8, Block 2, Jones addition, section 19-1n-1e, Bethel at 1,357-71 feet, shot with 10 quarts, estimated at 430 bbls.; W. F. Lacey No. 1 Roane & Pittenger, Lot 3, Block 3, Jones addition, section 19-1n-1e, Bethel at 1,359-70 feet, shot with 10 quarts; estimated at 285 bbls.; J. P. Olstrom No. 1 Dehn, Lot 2, Block 3, Jones Addition, section 19-1n-1e, Bethel sand at 1,372-77 feet, shot with 10 quarts, estimated at 310 bbls.; G. C. Rockwood No. 1 Mathis, Lot 5, Block 2, Crosby addition, section 19-1n-1e, Bethel at 1,376-81 feet, 77 bbls.; Simmel No. 1 Troutt, Lot 4, Block 3, Crosby addition, Bethel at 1,388-94 feet, 125 bbls.

New Pool in Marion

The Texas Co. No. 1 Tate, which opened a pool east of Centralia in Marion County with a well starting at 732 bbls. of oil in 23 hours, from Benoist sand at 1,692-1,735 feet, was the well of the week in Illinois. It is located 660 feet from N and 762 from W lines of NW quarter section 5-1n-2e. It had been drilled to 1,916½ feet where there was good saturation, but was plugged

(Continued on Next Page)

Birk City Operators Talk Proration or Sunday Shut Down; Too Much Oil

HENDERSON, Ky., July 11.—The Birk City pool, which was opened in eastern Henderson County close to the Green River, has jumped the river into Daviess County, where the Major Oil Co. has a well on the Onis Greer land estimated at 165 bbls. from McClosky lime at 1,861-91 feet, without having been acidized. It was not yet a completion when this was written.

On the Henderson County side of the field, Hoosier Drilling Co. No. 4 C. T. Blackwell was swabbing 238 bbls. per day after having been drilled into the McClosky pay 5½ feet. W. E. Hupp No. 1 O. L. Boswell, east tract, had McClosky pay at 1,896-1,904 feet, and was estimated good for 200 bbls. a day. W. E. Hupp No. 1 T. C. Jones, 14 acres, after an acid treatment in McClosky lime, pumped and flowed 40 bbls. of oil per hour. Hoosier Drilling Co. No. 5 C. T. Blackwell was drilling into the pay, while No. 6 C. T. Blackwell set surface pipe at 135 feet.

Carter Oil Co. was building derrick for No. 4 O. L. Boswell, west tract, and Hoosier Drilling Co. No. 1 Monroe Pitts was spudding.

Other wells in the field reported drilling progress.

The Birk City pool is estimated to be producing 3,500 bbls. per day and it will soon increase this output very materially. The Hoosier Drilling Co. No. 4 Blackwell, above mentioned, is expected to produce 600 bbls. a day after it has been acidized. The company discovered the Birk City pool on the Blackwell lease and the discovery well which started on April 22 at about 1,600 bbls. per day is still good for 300 bbls. per day.

The Major Oil Co., which brought in the first well in the field on the Daviess County side of the river, is made up of Walter Sargent and Sam Madden of Owensboro.

Already there is talk of voluntary proration of production in Birk City, or a Sunday shutdown of producing. There is no pipe line entering the field but the Green River is a convenient and cheap means of getting the oil out to up the Ohio River refineries by barge. The Fordville Pipe Line has a gathering system in the field, but the completions have been keeping ahead of all tankage and pipe line facilities and the field is the scene of much activity in the work of erecting tanks and laying lines to new wells. Extra tanks have been brought in for the wells on the Dempewolf farm and to the Ollie Benham tract, where pumping had to be stopped because the storage was full.

Thompson Drilling Co. has resumed drilling on the Annabelle Haynes lease at 1,400 feet. The Jones sand was tested and now the operator is bound for the McClosky pay.

Travis B. Williams has been granted drilling right on a 19.44-acre tract out of the Hugh Meyers lease along Green River. There are 11 wells drilling in Henderson County in and outside of the Birk City pool, and 12 wells drilling in Daviess County, in and outside of the Birk City field.

Following is the report of completions and new operations by county, in western Kentucky:

In Butler County, 6 miles southeast of Beaver Dam, Porter Evans and others No. 1 J. D. Crayon, spudding in. Huntsville district: Porter Evans and others No. 1 E. C. Harper, dry and abandoned, total depth 700 feet; No. 2 E. C. Harper, 10 bbls. per day from Jett sand at 155-71 feet. Big Springs School district: Porter Evans and others No. 1 Minnie Perry, moving in.

In Daviess County, Birk City district: Major Oil Co. No. 1 Onis Greer, estimated at 165 bbls. per day before acidizing, well acidized in McCloskey lime at 1,861-91 feet. Newman district: Bailey & Bond No. 1 W. J. Mulligan, rig on location. Pellville district: J. B. Mayers and others No. 1 J. A. Carico, drilling at 590 feet. Berry School district: Globe Oil Co. No. 9 F. F. Coomes, dry hole at 600 feet; McDonough & Co. No. 1 Coomes, spudding in. Whitesville district: Joe Lang and others No. 1 Frank Fore, moving in. Cane Run School district: Ellis & Ashby No. 10 Myrtle Howard, 15-bbl. well from a combination of stray and Jett sands; No. 12 Howard spudding in.

In Hancock County, Easton district; J. B. Mayers and others No. 12 Jess Stewart, 5 bbls. from Jett sand.

Henderson County, Birk City district: Hoosier Drilling Co. No. 4 C. T. Blackwell swabbing 238 bbls. in 24 hours after being drilled 5½ feet in McClosky lime; No. 5 C. T. Blackwell drilling in; No. 6 C. T. Blackwell set surface pipe at 135 feet; Carter Oil Co. No. 4 O. L. Boswell, west tract, setting up derrick; W. E. Hupp No. 1 O. L. Boswell, east tract, estimated at 200 bbls. per day from McClosky saturation at 1,896-1,904 feet; W. E. Hupp No. 1 T. C. Jones, 14 acres, after being acidized, is pumping and flowing 40 bbls. per hour; Hoosier Drilling Co. No. 1 Monroe Pitts, spudding in.

In McLean County, North Livermore district: J. C. Miller, trustee, No. 13 Mrs. Fannie Foley, spudding in; O. D. Vickers and others No. 2 R. B. Hoover, dry hole at 1,260 feet; The Petroleum Co. and Ellis No. 1 W. E. Render, dry hole at 1,261 feet.

In Ohio County, Taffy district: Rex Pyramid Oil Co. No. 7 Scott Ambrose, 15-bbl. well from Jett sand; Fordsville Oil Co. No. 5 Magnolia Smith, drilling at 375 feet; Western Kentucky Petroleum Co. No. 38 Mary Elmore, spudding in. Adaburg district: Leeper Oil Co. No. 2 W. Froman, 5-bbl. well from Jett sand at 732-47 feet; Mecca Oil Co. No. 3 E. W. Wedding, 500,000 feet of gas per day at a total depth of 228 feet. Buford district: J. H. Wilson and others No. 4 N. C. Hudson, 15-bbl. well from Jett sand. South Livermore district: W. E. Hupp and others No. 1 Livermore Timber Co., 50,000 feet of gas from Bethel sand at 1,245-49 feet.

back to 1,806 feet. It flowed through casing when completed. Aux Vases formation was penetrated at 1,752-95 feet.

In Clay County

Pure Oil Co. No. 1 MacWatkins, C E half SW SW section 22-1n-7e, Clay County, was dry and abandoned at 3,146½ feet. Pure Oil Co. No. 1 J. E. Moseley, C E half NW SW section 16-2n-8e, had pay at 3,013-18 feet, which was acidized with 2,200 gallons. The well produced 72 bbls. of oil and 21 bbls. of water initially. Pure No. 2 C. R. Bunn-A, C E half NE NW section 16-2n-8e, had pay at 3,006-16 feet, and started at 520 bbls. per day; Andy Bruner No. 1 Kuyoth, NW cor. section 30-2n-8, is a 20-bbl. well at 3,040 feet after a 2,000-gallon acid treatment.

Richland County

Pure Oil Co. No. 1 Van Mater, C S half NW NW section 7-2n-9e, Richland County, total depth 3,014 feet, was acidized with 8,000 gallons and produced 634 bbls. initially. Pure Oil Co. No. 2 Wheeler, 600 feet from N and 330 from E lines of NW quarter section 17-3n-9e, was acidized with 5,000 gallons in pay at 2,948-58 feet, total depth 3,008 feet, and was good for 42 bbls. the first 24 hours. Ohio Oil Co. No. 4 Schiering, 900 feet from N and 684 from W lines of SE quarter section 32-4n-9e, produced 167 bbls. initially after a 3,000-gallon acid treatment at 3,088-93 feet. Sam Raitman No. 1 O'Donnell, 245 feet from N and 285 from E lines of NE quarter section 27-4n-10e, had pay at 3,054½-65 feet and flowed 1,500 bbls. of oil in 24 hours. It was given an allowable of 350 bbls. per day. This is in the Olney pool. In the same pool Frank Mitchell and others No. 1 Bunn, section 26-4n-10e, was a 750-bbl. well from pay at 3,088-93 feet. It had been acidized with 5,000 gallons.

In Fayette County, Kingwood Oil Co. No. 1 Stroble, a wildcat, NW SW NE section 22-7n-4e, was dry and abandoned at 2,404 feet. Carter Oil Co. No. 1 Alsop, C NW SW NW section 12-8n-3e, Louden or Beecher City pool, is a 32-bbl. well at a total depth of 1,567 feet. Carter Oil Co. No. 1 Lander and Wood, NW NE SW section 15-8n-3e, started at 103 bbls. per day at 1,475-1,507 feet. Carter Oil Co. No. 1 Wright, C SE SW SE section 20-8n-3e, was shot with 20 quarts at 1,475-85 feet, and made 115 bbls. initially. Carter Oil Co. No. 1 Brauer, SE NE SE section 21-8n-3e, was good for 127 bbls. after a 30-quart shot at 1,522-36 feet. J. T. Babcock and others No. 1 Rhodes, C SW NW SE section 28-8n-3e, had pay at 1,680-95 feet and pumped 106 bbls. of oil and 20 bbls. of water the first 24 hours.

In Washington County, Cox and others No. 1 Hughes, SE NE SE section 8-1s-3w, was dry and abandoned at 1,499 feet. Dry Benoist was penetrated at 1,232 to 1,302 feet.

OHIO

LIMA, Ohio, July 11.—A 60-bbl. oil well in Seneca County, north of Tiffin, marks the second successful completion in the revived Green sand development. The well was drilled by the Sun Oil Co. on the Mary Crum tract in section 7, Clinton Township; it made 60 bbls. of oil the first 24 hours after a 60-quart shot from 2,057-72 feet. It was estimated that the well would be good for 40 bbls. settled production. The gravity of the oil is 43.9 degrees which is considerably higher than the Trenton oil in that area, the best of which was 41 degrees.

In Putnam County, Blanchard Township, Morton-Stuart Petroleum Co. No. 8 W. D. Williams, section 22, made 24 bbls. of oil the first day after shot from the Trenton at 1,331-72 feet.

In the central Ohio area, Gas Producing Co. completed a 2,000,000-foot gas well in Clinton sand at 2,986 feet. The well is in Perry County, Reading Township, on the D. G. Wagner tract in section 8.

In Athens County, Bern Township, Bern Oil & Gas Co. No. 17 W. G. Selby, section 30, found the Maxon sand dry at 972 feet. In Carthage Township, Ohio Fuel Gas Co. No. 1 H. S. Jones, fraction 12, was dry in the Injun sand at 1,520-23 feet.

In Gallia County, Addison Township, Barton & Utsinger No. 1 Orris Mink, section 34, is a small gas well in the second Berea at 1,540 feet.

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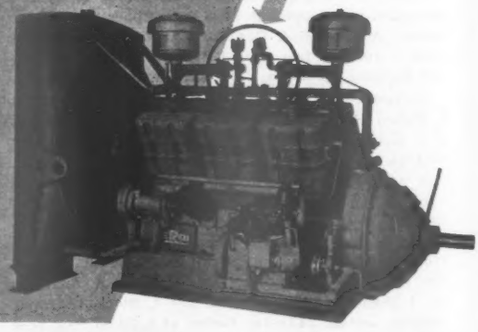

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In Guernsey County, Millwood Township, M. J. Purdy No. 2 Laura Burson, section 9, made a small showing of oil in the Berea at 1,615-18 feet and was plugged without being shot.

In Knox County, Howard Township, H. E. Perkins No. 1 Frank Wyant, Lot 14, third quarter, found the Clinton sand dry at 2,658 feet.

In Licking County, Mary Ann Township, Armbruster No. 2 J. P. Murphy, Lot 1, fourth quarter, is a gas well gauging 120,000 feet in the Berea at 773 feet. In Perry Township, George Vandergrift No. 7 Beulah Weigle, section 16, made 20 bbls. of oil the first day after shot from the Berea at 743-55 feet. In Fallsburg Township, McClay Brothers No. 4 U. G. Porter, section 13, is an oil well making 130 bbls. the first 24 hours after shot from the Clinton sand at 3,067-3,117 feet. In Franklin Township, Wehrle Gas Co. No. 1 Eliza J. Morrison, section 22, found the Clinton sand dry at 2,865-2,912 feet. In Mary Ann Township, St. Albans Drilling Co. No. 1 James Keaser, Lot 22, fourth quarter, was a small gas well in the Berea at 675 feet.

In Knox County, Jackson Township, Hultz-Kundtz, Inc. No. 5 L. A. Stone, section 10, made 130 bbls. of oil the first 24 hours after shot from the Clinton at 3,118-75 feet. In Union Township, H. E. Perkins No. 2 William E. Durbin, section 4, made 500,000 feet of gas and 100 bbls. of oil the first 24 hours after shot from the Clinton sand at 2,766-2,816 feet. In Pike Township, C. O. Moore No. 1 W. H. Eastman, section 17, is a small Berea gas well at 652 feet.

In Lorain County, Grafton Township, Ohio Fuel Gas Co. No. 1 H. A. Baker, Lot 45, is a gas well gauging 200,000 feet in the Clinton sand at 2,556-65 feet.

In Meigs County, Salisbury Township, F. & O. Royalty Co. No. 2 W. O. Hawk, section 36, made 200,000 feet of gas in the Maxburg 600-foot sand at 595-602 feet.

In Monroe County, Benton Township, Hanlon & Scohy No. 2 J. R. Amos, section 23, is a 3-bbl. pumper in the first Cow Run sand at 765-813 feet.

In Stark County, Lawrence Township, Kime No. 1 Adam Stitz, section 2, is a gas well gauging 500,000 feet from the Clinton sand at 4,021-46 feet.

In Washington County, Barlow Township, C. W. Peavy No. 1 P. H. Smith, section 8, made 250,000 feet of gas from the Maxon sand at 1,242 feet.

In southwestern Ohio, Ross County, Union Township, Glenwood Oil & Gas Co. No. 1 Glenwood Park Farm, was abandoned at 2,674 feet. No showings were found. The Trenton rock was logged at 1,950-2,607 feet, and the St. Peter sand at 2,632-74 feet. The St. Peter carried considerable water.

In Adams County, Franklin Township, Sinking Springs Oil Co. No. 1 Charles Norte is shut down at 575 feet.

EASTERN KENTUCKY

ASHLAND, Ky., July 11.—Two good completions, one an oil well and the other a gas well, hold the spotlight in the report of eastern Kentucky field operations this week. Two other oil wells were completed but they are only small daily producers.

Amp Burnett completed No. 5 Day Lumber & Coal Co. land, on Walkers Creek in the Hell Creek district of Lee County, at a total depth of 1,100 feet. It has not yet been shot but is making 75 bbls. of oil per day.

Kentucky-West Virginia Gas Co. completed No. 567 M. Slone and M. D. Slone land on Levisa Fork, Floyd County, at a total depth of 3,003 feet, in white slate and shale. The well has a production of 2,243,000 feet of gas daily.

South Penn Oil Co. No. 23 Abbie J. McCoy land, on South Fork in the South Fork district of Powell County, is a 1-bbl. well. In the same district Joe T. Brown, Treasurer, completed No. 3 on the Lowery Heirs land at Mount Springs, with a production of 1-bbl. of oil daily.

In Powell County, Mrs. Agatha Wireman was drilling below 600 feet in No. 24 J. M. Townsend land, on South Fork. Wire Brothers are drilling below 200 feet in No 4 Albert Stewart

In Magoffin County, Dona Wheeler was drilling at 250 feet in No. 1 Cleffa Cochran on Gullett Branch.

In Pike County, Inland Gas Corp. is down 3,450 feet, in white slate, in No. 199 Helen Leslie. Ralph Stafford and others are down 150 feet in No. 1 Lawrence Fairchild, on Little Paint Creek.

In Floyd County, Inland Gas Corp. was drilling at 1,040 feet in slate and shells in No. 201 Layne Heirs land, on Toms Creek. Kentucky-West Virginia Gas Co. was drilling at 1,597 feet in lime in No. 571 on the Noah Jervis land on Levisa Fork, and at 2,587 feet in shale

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in No. 573 on the Jennie Caldwell land in the same vicinity.

In Martin County, Kentucky-West Virginia Gas Corp. is idle at wells Nos. 5,243 and 5,244 on C. W. Preece land on Coldwater Fork and is down 1,438 feet in slate in No. 5,242 on the same farm. The same firm is down 440 feet in sand in No. 5,245, also on the C. W. Preece land.

California Fields

(Continued from Page 72)

No. 2 Geissinger in section 35-28-25, flowing 1,630 bbls. of 38.3-gravity oil and 1,200,000 feet of gas from the Rio Bravo zone at 11,463 feet. This well which is flowing through a 20/64-inch bean under a tubing pressure of 1,725 pounds and a casing pressure of 1,820 pounds was not allowed to produce to its maximum due to an unwritten agreement to restrict actual production to a maximum of 500 bbls. per well daily. Superior No. 1 Anderson, a recent completion at 11,608 feet, has been killed to correct a water problem that developed after the well had been on production for several days.

Kettleman Hills

Kettleman North Dome Association's field department has just closed a busy week during which three wells were put on production and construction started on two additional rigs. One of Kenda's new wells was completed in the Avenal zone from 11,041 feet and it showed an initial daily production of 920 bbls. of oil and 133 bbls. of water along with 19,799,000 feet of gas. This is No. 67-20-J in section 20-21-17, and the hole was finished with 544 feet of 4¾-inch liner landed on bottom and carrying perforations at 10,616-95 feet, 10,715-10,873 feet and at 11,001-41 feet and 9,518 feet of 3-inch tubing. The two other completions of Kenda were finished in the productive Temblor. No. 38-8-Q in section 8-22-18, was completed flowing 3,265 bbls. of clean 34.3-gravity oil and 2,226,000 feet of gas from 8,761 feet. Association's No. 47-18-Q in section 18-22-18, has been completed flowing 3,296 bbls. of 33.9-gravity oil and 2,000,000 feet of gas from 7,640 feet. It was originally carried to 8,007 feet but was plugged back before the well was turned loose. Nos. 38-8-Q and 47-18-Q were new wells started from the grass roots but No. 67-20-J was deepened to the Avenal zone after having been completed in the overlying Temblor.

Ten Section

Shell Oil Co., discoverer of the Ten Section field and the only operator to finish a productive well in the field, has completed two additional wells which showed an aggregate initial daily production of 6,194 bbls. In section 20-30-26, the company completed No. 58-20-B flowing 2,690 bbls. of 33.9-gravity oil and 2,000,000 feet of gas from 8,212 feet. In section 29-30-26, Shell No. 38-29-A has been completed flowing 3,504 bbls. of 33.8-gravity oil and 4,120,000 feet of gas through two 1-inch beans. This well was finished with 342 feet of 4¾-inch liner carrying perforations at 7,895-7,995 feet, 8,010-20 feet and at 8,175-8,217 feet. It was given a preliminary production test in June but did not make a potential flow test until later. Shell Oil Co. is continuing to develop this field along normal lines notwithstanding it is producing only a very small part of the potential production developed. Ten Section field is estimated to have a minimum ultimate production of 100,000,000 bbls. but this will be substantially increased if subsequent drilling proves existence of the Rio Bravo sand beneath the present productive horizon.

Montebello

Some idea of the potential possibilities of the west end of the Montebello field should be revealed within a few days as Brookline Oil Co. is making preparations to conduct a production test on No. 1 Drake Community in the southwestern end of the structure, just north of Beverly Boulevard. This well failed to find anything worth testing in the fifth zone and the hole was carried into the top of the Miocene. Top of the sixth zone was cored to 6,365 feet and casing was landed and cemented. This well is rather far down on the flank of the structure and will bear watching because if commercial production is developed it will focus attention on the west end. Herley-Kelly, Inc., has the makings of an excellent well in No. 1 Burke Community as a formation test at 6,200-6,302 feet resulted in a strong blow of gas and a subsequent flow of oil for a period of 20 minutes. The result indicated the well would be good for about 2,000 bbls. of 36.1 gravity. The test was made through a 32/64-inch bean and plans were started to land a string of casing preparatory to early test. The fifth zone was found wet and the hole was carried into the sixth which is of Miocene age. The Montebello city council has been considering a new fire ordinance to cover the entire field, imposing a tax of $40 per well for inspection fees on all wells in both the new and old sections.

Los Angeles Basin

The El Segundo field of Los Angeles Basin jumped back into the limelight again when Sovereign Oil Co. completed No. 2 El Segundo flowing 690 bbls. of 24.9-gravity oil and 300,000 feet of gas from the schist contact with bottom of the hole at 7,326 feet. This well was finished with 444 feet of 4¾-inch liner including 326 feet of perforated and 6,876 feet of 2½-inch tubing. A rig for No. 3 El Segundo was erected about a week ago as it had been the intention of the company to begin another well as soon as No. 2 was completed. The result of the production test on No. 2 El Segundo was so satisfactory the company has started rig for No. 4 El Segundo and instead of drilling one additional well will spud two. Millerand Oil Co. has completed No. 1 Miller in the Yorba Linda district pumping 120 bbls. of 14.9-gravity oil from 1,735 feet. Barnsdall Oil Co. is putting finishing touches on No. 4 Trust in the Rosecrans field and expects to have it ready for a production test before the close of this week. Union Oil Co. should have three potential producers ready for production tests within 15 days and should all result in large production. This company is running four strings on the Rosecrans lease and has location staked for a well scheduled to be spudded before the close of July. Superior Oil Co., which recently extended the productive limits of the deep O'Dea zone southward by completing No. 8 Maxwell, is making good progress with No. 1 Callender and should have it ready for production within 10 days. Universal Consolidated is scheduled to complete No. 4 Trust around the end of July and good production is anticipated. Drilling operations in the Dominguez field have recently been reduced to a minimum due to restricted operations of Shell Oil Co. and Union Oil Co. There are only four strings in operation with one new rig nearing completion.

San Joaquin Basin

Completions in San Joaquin Valley were comparatively small this week and scattered over a number of old fields. In the Kern River field McDonald & Dearin completed No. 4 in section 11-28-27, pumping 112 bbls. of 13.6-gravity oil from 1,971 feet and in section 34-28-28, Hast Oil Co. finished No. 3 Kern pumping 12 bbls. of 14.3-gravity oil from 376 feet. Alfred Fuhrman No. 25 in section 21-28-28, finished at 710 feet was good for only about 2 bbls. of heavy oil. It was still pumping a rather large amount of water and production may increase somewhat after the head of water has been diminished. In the Fruitvale field of Kern County, Mesa Petroleum Co. has completed No. 1 Dixon in section 23-29-27, pumping 35 bbls. of 17.6-gravity oil cutting 5 per cent from 3,115 feet. The well was finished with 83 feet of 6⅝-inch liner including 53 feet of perforated landed on bottom. Drilling operations are practically nil in the Fruitvale field although Western Gulf Oil Co. is getting ready to start work on No. 37-B Kern County Land in section 14-29-27.

In the Mount Poso field, Shell Oil Co. has completed No. 7 Mathews fee in section 4-27-29, pumping 245 bbls. of 15.5-gravity oil cutting 5 per cent daily from 1,650 feet after the hole had been finished with 70 feet of 5½-inch liner including 41 feet of perforated. In the Round Mountain field Honolulu Oil Corp. has completed No. 46 in section 20-28-29, pumping 285 bbls. of 16.3 gravity from 1,973 feet. No. 48, same section, is being rigged up and the company has a rig standing for No. 47. Crestmont Oil Co. has logged top of the productive Vedder zone in No. 4 Staley in section 8-28-29, and this well, a recent sput, should be ready for production shortly. Shell Oil Co. has picked up the pay in a well in this field as No. 1-3 Olcese in section 16-28-29, cored the Vedder zone from 1,694 feet to 1,714 feet. Ohio Oil Co. tested some showings above the shoe of the 7-inch water string landed in its deep test in the Buena Vista Lake field by perforating in the interval between 10,018 feet and 10,044 feet but got salt water. A squeeze job has since been effected in an attempt to fill up the perforations and a production test of showings below the shoe

(Continued on Page 92)

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.
Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E. Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Orcutt*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	...	...	...	$.80	$.76	$.76	$.77	$.78	...	...	$.70	$.70	$.70	...	...	$.70	...
15-15.9	.80	.79	.74	.78	.79	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.70	...
16-16.9	.80	.79	.74	.78	.79	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.70	$.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	...	...	...	.82	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	...	...	...	.85	.76	.78	.77	.78	...	$.70	.74	.74	.71	$.70	...	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	...	...	...	.88	.78	.82	.77	.80	...	.70	.78	.78	.72	.70	...	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	...	...	...	.91	.80	.85	.77	.84	$.78	.73	.82	.82	.74	.70	...	.79	.80
22-22.9	.92	.82	.74	.92	.96	.96	.92	...	...	...	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	...	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	...	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	...	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	...	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	...	.87	.88
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	...	1.02	.95	...	.89	.99	.86	.88	1.01	.98	.90	.83	...	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	...	1.05	.98	...	.92	1.03	.90	.91	1.06	1.02	...	...	...	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	...	1.10	1.03	.88	...	...	1.02	...	.96	1.06	.95	.95	1.10	1.06	...	...	...	.95	...
28-28.9	1.14	1.10	.90	1.14	1.15	...	1.14	1.07	.90	...	...	1.06	...	.99	1.10	.99	.99	1.15	1.10	...	...	...	.97	...
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	...	...	1.09	...	1.03	1.14	1.03	1.02	1.20	1.14	...	...	...	.99	...
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	...	...	...	1.07	1.17	1.08	1.06	1.25	1.18	...	...	...	1.01	...
31-31.9	...	...	...	...	1.24	Pipe	1.24	1.22	.97	Ship	...	...	...	1.11	1.21	1.12	1.09	1.29	...	...	...	...	...	...
32-32.9	...	...	...	...	1.27	Line	1.27	1.27	1.00	...	...	...	...	1.14	1.25	1.16	1.13	1.34	...	...	...	...	...	...
33-33.9	...	...	...	...	...	...	..	1.32	...	$1.28	...	...	...	1.18	1.28	1.20	1.17	1.38	...	...	...	$1.19	...	...
34-34.9	...	...	...	...	...	...	...	1.37	...	1.32	...	...	...	1.22	1.32	1.25	1.20	...	...	...	...	1.23	...	...
35-35.9	...	...	...	...	...	...	...	1.42	...	1.35	...	...	...	1.25	...	1.29	...	...	...	...	...	1.27	...	...
36-36.9	...	...	...	...	...	...	...	1.46	...	1.39	...	...	...	1.29	...	1.33	...	...	...	...	...	1.31	...	...
37-37.9	...	...	...	...	...	...	...	1.51	...	1.43	...	...	...	1.32	...	1.37	...	...	...	...	...	1.35	...	...
38-38.9	...	...	...	...	...	...	...	1.56	...	...	...	...	...	1.36	...	1.42	...	...	...	...	...	1.39	...	...
39-39.9	...	...	...	...	...	...	...	1.61	...	...	...	...	...	1.40	...	...	...	...	...	...	...	1.43	...	...
40-40.9	...	...	...	...	...	...	...	1.66	...	...	...	...	...	1.43	...	...	...	...	...	...	...	...	...	...

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. *Posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over. By Standard Oil Co., effective October 15: El Segundo, 14 to 16.9 degrees, 80 cents; 19-19.9, 82 cents; 20-20.9, 85 cents; 21-21.9, 88 cents; 22-22.9, 92 cents; 23-23.9, 95 cents; 24-24.9, 99 cents; 25-25.9, $1.03; 26-26.9, $1.06; 27-27.9, $1.10; 28-28.9, $1.14; 29-29.9, $1.17; 30-30.9, $1.21. Wilmington, 14 to 16.9, 75 cents; 17-17.9, 77 cents; 18-18.9, 79 cents; from 19 degrees upward, prices same as Signal Hill.

Kansas Developments

By
DAL DALRYMPLE

Potential at a Record High; Pool Opened Near Wichita

Potential production of Kansas oil wells soared to a new record in June, the new figure for the state being 3,349,528 bbls. daily, according to report of E. G. Dahlgren, oil and gas conservation director for the corporation commission. The total represented current rating for 18,465 wells. State potential for the preceding month was 3,313,449 bbls.

Opening of a new oil pool near Wichita in Sedgwick County was indicated at the week-end at National Refining Co. No. 1 Trustee, SE SE NE section 8-27-2e. Oil rose 2,000 feet in the hole from Chat at 2,945 feet, total depth 2,986 feet. It had not been tested, but was estimated good for 200 bbls. of oil daily. Location is 7 miles northeast of Wichita and 1½ miles northeast of the Eastborough pool, on a 960-acre lease block held by the operators.

The Lyons gas pool in Rice County was extended 1½ miles southward at Drillers Gas Co. and others No. 1 Lyons, C NW SE section 2-20-8w. It had initial production of 34,000,000 feet of gas from Arbuckle lime at 3,294-3,300 feet, total depth. The pool was opened in 1936 at Atlantic Refining Co. No. 1 Pulliam, NE section 35-19-8w, with initial yield of 150,000,000 feet of gas daily from Arbuckle lime at 3,277-3,885 feet. The new producer is 1 mile north of Shell Petroleum Corp. No. 1 Maughlin, NE NW SE section 11-20-8w, originally completed for 36,500,000 feet of gas daily but later abandoned. Gas from both the Pulliam and Lyon producers has a sulfur content. A treating plant for removal of the sulfur may be erected in the field by the Drillers company, it was reported.

The Brandt pool of Butler County was due for an extension one-half mile to the southeast at Rex & Morris and others No. 1 Hutton, NW SW SW section 14-28-7. It topped Mississippi lime at 2,666 feet, had oil showing at 2,674-2,702 feet, oil rose 500 feet in the hole in 10 hours and it was to be acidized.

A wildcat 3 miles south of Keighley and about 1½ miles north of the Brandt pool also was showing as a probable producer. It was the Heilman & Harwood No. 1 Sawyer, SE NE NE section 10-28-7. Operators were preparing to set casing and test after it showed 1 bbl. of oil an hour naturally from Chat topped at 2,732 feet, total depth 2,747 feet.

Discovery of a new producing area in Sumner County was indicated at Sam A. Murphy and others No. 1 Tate, SE SE NW section 31-32-2e, 3 miles southwest of the West Oxford pool and 7 miles southeast of Wellington. It found Arbuckle lime at 3,746-47 feet, total depth, swabbed 3 bbls. of oil on preliminary tests, and operators were scheduled to make pumping test.

Wildcat Completions

The Lane County wildcat drilled by Phillips Petroleum Co. at No. 1 Kees, C SE SE section 3-19-30w, southwest of Dighton, was dry and abandoned at 4,911 feet, total depth. It entered anhydrite at 2,187 feet, Topeka lime 3,690 feet, Kansas City lime 4,075 feet, and had caving hole at 4,893 feet. The cavings and lost circulation contributed to the troubles encountered in drilling this outpost.

Cities Service Oil Co. No. 1 Hall C, C E half W half NE section 35-11-17w, Ellis County wildcat, found Arbuckle lime at 3,637-75 feet, total depth, and was dry and abandoned.

R. E. Day and others No. 1 Feltes, SE SE NE section 14-16-12w, wildcat east of the Beaver pool in Barton County, was abandoned at 1,875 feet, total depth.

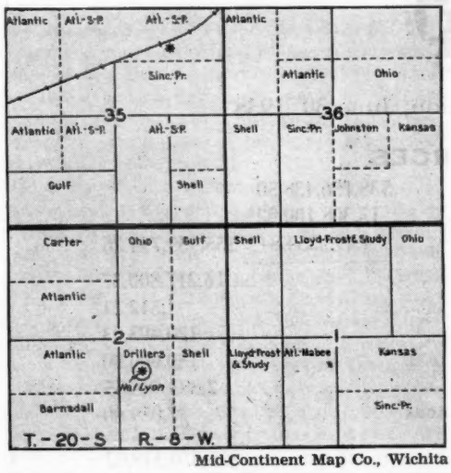
Colonial Oil Co. No. 1 Lust, NW NW NE section 19-17-13w, wildcat on a Shell Petroleum Corp. farmout northwest of Hoisington in Barton County, found Arbuckle lime at 3,519 feet and was dry and abandoned at 3,566 feet, total depth.

C. C. Whittiker and others No. 1 Bressner, NW NW SE section 8-26-13, Greenwood County wildcat, had Mississippi lime at 1,486 feet, was bottomed at 1,498 feet, plugged back to 1,495 feet, acidized with 1,000 gallons, pumped 14 bbls. of oil and 175 bbls. of water and pumped down in four days, and was abandoned.

Cities Service Oil Co. No. 1 Gibson, SW SE NE section 10-18-8w, Rice County wildcat, was an abandoned location.

Stafford County

Parker Drilling Co. and others No. 2 McComb, NW SW NW section 24-24-11w, Zenith pool, Stafford County, flowed 394 bbls. of oil in the first four hours, 418 bbls. the next four hours and was rated potentially at 2,364 bbls. of oil daily. Production was from Misener sand topped at 3,795½ feet, total depth in



Mid-Continent Map Co., Wichita

Newest producer in the Lyons gas pool, Rice County, is Drillers Gas Co. No. 1 Lyon, section 2-20-8w

Viola lime at 3,809 feet. The Viola formation was topped at 3,806 feet and had nothing showing.

Stanolind Oil & Gas Co. and others No. 5 Ferris B, NE NW NW section 23-24-11w, had Misener pay at 3,813 feet with top of Misener zone at 3,795 feet, and was bottomed at 3,823 feet. It was shot and flowed 179 bbls. of oil the first four hours, 175 bbls. the next four hours, through tubing, and made potential of 1,052 bbls. of oil.

Same company's No. 2 Martin, NE NE NW section 14-24-11w, had Misener sand at 3,777-83 feet, total depth 3,788 feet, and pumped 105 bbls. of oil in three hours, initially. On potential test, it pumped 139 bbls. of oil in eight hours through tubing, making potential of 346 bbls. of oil.

Stanolind Oil & Gas Co. No. 1 Taylor, NW NW NE section 33-25-12w, had nothing showing in Arbuckle lime at 4,207-72 feet, total depth, and was dry and abandoned.

Same company's No. 1 Hewitt, NW cor. section 34-25-12w, had Arbuckle lime at 4,259-68 feet, total depth, with a sulfur odor, and was dry and abandoned.

Barton County

Indian Territory Illuminating Oil Co. No. 6 Sessler, C S half S half SW section 24-20-11w, South Silica pool, Barton County, found Arbuckle lime at 3,244 feet, was bottomed at 3,256 feet, pumped 418 bbls. of oil the first four hours, 413 bbls. the next four hours and made potential of 2,478 bbls.

Helmerich & Payne No. 6 Stettinger, NE SW NE section 1-16-14w, was an abandoned location.

New work in Barton County: Helmerich & Payne No. 6 Stettinger, SW SW NE section 1-16-14w, Trapp area, rigging up rotary; C. L. Price No. 1 Stumps, SW SW SE section 3-17-12w, Odin pool, drilling below 1,875 feet; Atlantic Refining Co. and others No. 1 Soderstrom, NE NE SW section 21-17-13w, an old well in the Hoisington area, being deepened from 3,254 feet; Magnolia Petroleum Co. No. 12 Meda Steckel, NW cor. section 1-20-11w, Silica field, set 13-inch casing at 195 feet; Crown Petroleum Co. and C. E. Ash No. 1 Koch, SE SW NW section 7-20-11w, building rig; Gulf Oil Corp. No. 1 Kasselman, SE SE SW section 23-20-11w, South Silica pool, building rotary rig; Indian Territory Illuminating Oil Co. No. 9 Rose Bryant, C N half N half NW section 25-20-11w, location.

Estimated Daily Production

Estimated daily production for Kansas for the week ending July 9, and for the preceding week was as follows:

	Barrels	
	July 9	July 2
Oxford City	1,125	1,100
Burrton	10,225	10,200
Ritz-Canton	4,150	4,175
Graber	1,875	2,725
Hollow-Nikkel	3,050	3,000
Lerado	925	775
Voshell	1,900	1,925
Wellington	1,300	1,125
Ellsworth County:		
Lorraine	1,825	1,800
Other pools	1,180	1,110
Rice-Barton counties:		
Bloomer	1,950	1,700
Chase	4,400	3,675
Geneseo	2,400	2,275
Raymond	850	650
Silica	7,550	9,575
South Silica	1,400	2,475
Keesling	1,075	875
Wherry	2,800	2,675
Miscellaneous Barton	3,930	3,755
Miscellaneous Rice	3,290	3,775
Russell County:		
Fairport	1,920	2,075
Gorham	1,560	1,485
Russell	1,060	1,075
Sullivan	4,550	4,760
Trapp	7,050	6,280
Miscellaneous Russell	7,565	6,425
Sedgwick County:		
Valley Center	1,050	1,030
Miscellaneous	2,785	2,845
Ellis County:		
Bemis	5,350	3,350
Miscellaneous	2,885	3,470
Kingman County	659	580
Stafford County	2,395	3,915
Greenwood County	9,000	9,050
Butler County	14,575	14,555
Other fields	22,296	22,660
Total Kansas	141,900	143,150

Rice County

Skelly Oil Co. No. 3 Volkland B, SW SW NW section 5-18-10w, Stumps area, Rice County, pumped 407 bbls. of oil in four hours after acidizing Arbuckle lime topped at 3,201 feet, total depth 3,208½ feet. On potential test it pumped 820 bbls. of oil in eight hours, making potential of 2,381 bbls. of oil, with no water showing.

Continental Oil Co. and others No. 1 Lewis A, NW cor. section 13-18-8w, Geneseo district, found Arbuckle lime at 3,226 feet, total depth 3,240 feet, pumped 456 bbls. of oil in six hours and later made potential of 1,946 bbls. of oil. On potential test it pumped 324 bbls. of oil the first four hours and 326 bbls. the next four hours.

C. H. Weaver No. 1 Lansing, NE SE NE section 26-18-8w, topped Arbuckle lime at 3,241 feet, had a hole full of water at 3,296-3,302 feet, total depth, and was abandoned.

E. V. Holland No. 1 Malone, NE SW NE section

19-20-9w, had Simpson sand at 3,376 feet, was bottomed at 3,385 feet, the hole filled with water and it was plugged back to 3,378 feet. It made potential of 163 bbls. of 48.5-gravity oil.

Sinclair Prairie Oil Co. No. 5 Thompson, SW NE NW section 21-20-10w, an old well in the Raymond area, was plugged back from 3,348 feet to 3,196 feet, was shot and acidized and made potential of 160 bbls. of oil, recompleted.

Texas Co. No. 5 West, SE NW NW section 21-20-10w, an old well in the Raymond pool, was rigging up to deepen from 3,341 feet, total depth.

Transwestern Oil Co. No. 1 Rick, SE cor. section 17-20-10w, an old Raymond well, was deepened from 3,096 feet to Arbuckle lime at 3,321-24 feet, total depth, and was cleaning out.

Russell County

Two new operations in Russell County were reported. Phillips Petroleum Co. No. 4 Downing, NW SE SW section 19-13-14w, Atherton area, was a location. Central Petroleum Co. No. 1 Kuhnle, NE NE SW section 4-15-12w, Greenvale sector, was moving in rotary tools.

Stanolind Oil & Gas Co. No. 18 Mermis B, SW NW NE section 5-14-15w, Gorham district, Russell County, topped Kansas City lime at 3,056 feet, had pay at 3,080-83 feet, was bottomed at 3,084 feet, was acidized and made potential of 297 bbls. of oil.

Ellis County

The only completion of the week in Ellis County was Kerlyn Oil Co. No. 5 Rumsey, NE SW SW section 23-11-17w, Bemis district. It found Arbuckle lime at 3,415 feet, was bottomed at 3,419½ feet, pumped 538 bbls. of oil the first four hours, 532 bbls. the next four hours and made potential of 3,192 bbls. of oil, with no water.

McPherson County

Ohio Oil Co. No. 17 Decker, NW NW SE section 20-21-1w, Graber area, McPherson County, had Hunton lime at 3,297 feet, total depth 3,325 feet, and was acidized with 5,000 gallons. It pumped 78 bbls. of oil the first four hours, same amount the next four hours and made potential of 466 bbls.

Continental Oil Co. and others No. 8 Goering, C E half E half SW section 29-21-1w, made potential of 323 bbls. of oil after shooting and acidizing Hunton lime pay at 3,285-3,310 feet. It topped Wilcox sand at 3,417 feet, total depth 3,426 feet, and was plugged back to 3,356 feet.

H. & M. Drilling Co. and others No. 2 Peterson, SW NW SE section 24-19-3w, McPherson pool, was a location.

Ellsworth County

Cities Service Oil Co. No. 3 Rolfs, NE SE NE section 14-17-9w, an old well in the Lorraine area, Ellsworth County, was plugged back from 3,193 feet, total depth, to 3,107 feet, was shot and acidized and was recompleted as an 18-bbl. pumper.

Reno County

Derby Oil Co. No. 1 Wood, NE cor. section 36-22-5w, Reno County, found Simpson sand at 3,905 feet, was bottomed at 3,909 feet, was acidized and pumped 121 bbls. of oil the first four hours, 132 bbls. the next four hours and made potential of 724 bbls. of oil, with no water.

New Wildcat Tests

Pryor & Lockhart and associates No. 1 Lietzke, NE SW NW section 24-28-7, wildcat east of the Sensenbaugh pool in Butler County, was a cellar.

Fred Phillips No. 1 Hanshaw, NE NE SE section 32-27-3e, wildcat in Butler County and east of the South Andover pool, was a location.

Progressive Oil Co. No. 1 Evans, SE SW SE section 33-22-3e, wildcat in southern Marion County and northwest of the Elbing pool of Butler County, was a location.

Additional New Work

In Greenwood County, C. E. Christy No. 3 Dinius, NE SE SW section 31-24-13, was drilling below 650 feet; Greenway Oil Co. No. 1 Culter, SW NW SE section 32-25-11, was rigging up machine.

In Scott County, Atlantic Refining Co. No. 3 Pyle, C SE SW section 14-20-33w, Shallow Water pool, was a rig.

In Barber County, Barbara Oil Co. No. 3 Angell, C W half SW section 14-33-13w, was a cellar. It is in the Medicine Lodge sector.

In Grant County, Columbian Fuel Co. No. 1 Baughman, C NW section 28-28-36w, Hugoton gas field, was a location.

Oklahoma Fields

(Continued from Page 77)

section 36-6-10, an old well, was building derrick to deepen.

Kiowa County

Gauntt & Baker No. 1 Parks, NW NW SW section 29-7-20w, wildcat in Kiowa County, found Granite Wash showing water at 1,015 feet and was abandoned in that formation at 1,075 feet, total depth.

Fields & Nagle No. 3 Oster, SW SE SW section 27-7-17w, had a slight showing of oil but was dry and abandoned at 998 feet, total depth, in lime.

Tillman County

Indian Territory Illuminating Oil Co. No. 2 Graham, SW NW NE section 1-3s-19w, Frederick area, Tillman County, had Canyon lime at 3,084-94 feet, total depth, and flowed 480 bbls. of oil initially through casing.

Additional New Work

In Osage County: M. J. Graham No. 8 Osage, SW NW SW section 1-22-9, location; Tide Water Associated Oil Co. No. 9 Osage, N half NE SE SE section 20-24-9, rigging up machine; D. B. Mason No. 7 Osage, SW NE SE section 3-24-12, location.

In Noble County, Sinclair Prairie Oil Co. No. 2 Guthrie, NW SW SE section 31-21-2w, North Lucien area, building rig.

In Stephens County, George R. Pace and others No. 6-A Bush, SE NE NW section 3-2s-8w, Empire pool, drilling below 1,474 feet.

In Jefferson County: Joe Rogers No. 1-A Trout, SE NE SE section 18-7s-5w, Oscar-Seay pool, rigging up rotary tools; McNeis No. 1 Bohanon, NW SW NW SE section 33-6s-5w, location.

In Jackson County, W. E. Henderson and others No. 1 James, SW SW NW section 2-1n-20w, Altus pool, cellar.

NATIONAL BANK OF TULSA

TULSA, OKLAHOMA

Statement of Condition, June 30, 1938

RESOURCES

Cash and Due from Banks	$38,156,438.50	
U. S. Government Securities	13,308,100.92*	
Other Bonds and Warrants	4,495,254.84*	$55,959,794.26
Loans and Discounts		16,217,800.37
Overdrafts		1,512.21
Income Receivable Accrued		120,493.03
Stock in Federal Reserve Bank		180,000.00
Investment in Bank Premises		2,883,688.55
Customers' Liability under Acceptances		7,059.60
TOTAL		$75,370,348.02

LIABILITIES

Deposits		$63,304,584.39
Special and Temporary Deposit		5,500,000.00
Acceptances Executed		7,059.60
Income Collected not Earned		68,627.19
Interest, Taxes, etc., Accrued		71,759.00
Reserve for Preferred Dividends		20,625.00
Capital—Preferred	$1,375,000.00	
Capital—Common	2,375,000.00	
Surplus	2,250,000.00	
Undivided Profits and Reserves	397,692.84	6,397,692.84
TOTAL		$75,370,348.02

* Of the total of $17,803,355.76 U. S. Government Securities and Other Bonds and Warrants $5,451,750.00 par value mature after five years.

The Oil Bank of America

Member Federal Deposit Insurance Corporation

Cost of Production

(Continued from Page 17)

cent. The increase in total dry hole cost was probably about 300 per cent, equivalent to about 7 cents per barrel on production in 1937. The increment in cost due to the large increase in dry-hole expense (Item 4), together with Social Security and other new taxes (Item 8) appear to outweigh the reduction due to fewer lease cancellations, hence the average for overhead in Kansas has been raised from $.264 in 1934 to $.29 in 1937.

Miscellaneous revenue: According to the P.A.B. study, receipts from gas sales and miscellaneous sources averaged $0.16 per barrel in 1934. Gas sales probably comprise nearly all of this, because estimated sales of casinghead gas in 1934 times the field price gives about 1½ cents per barrel. The total revenue from gas sales probably increased about a third between 1934 and 1937, but with 50 per cent more production the average probably declined. However, the item is small, and to avoid introducing odd fractions of cents, the average for 1937 has been placed at $0.02.

Interest: The computations of depletion, depreciation, and development indicate a total investiment in Kansas in 1937 of about $100,000,000. At the standard rate of interest, 6 per cent, the average interest cost per barrel would be about 10 cents.

The estimates for Kansas for 1937, outlined above, are summarized in Table 1. In general, when compared with 1934 they indicate a moderate increase in the average production cost per barrel in recent years. However, the average sales price rose from $1.03 in 1934 to $1.23 in 1937, thus the average "profit" over and above a reasonable return on investment rose from 15 cents per barrel in 1934 to 26 cents per barrel in 1937.

Company and individual costs show a very wide range, for example, the P.A.B. reports from producers for 1934 for Kansas varied all the way from $.03 to $36.05 per barrel. However, the influence of these freak costs on the group averages was slight as the group costs varied only from $1.14 for wells yielding 0.1 to 2.9 bbls. per day to $.77 for wells making 27 bbls. and over.

As might be expected, costs vary inversely with the size of the wells and the amount of production. For example, 145 observations of P.A.B. data for 1934 showed 87 cases in which the average production cost for a particular group of wells was lower than for the group with the next smallest sized wells, and 58 cases showing the reverse, or increased cost for the larger wells. Of the 58 cases, however, 29 were cases in which the total production from the group with the larger-sized wells was the smaller. Enough of that. Sufficient to say the authors were emboldened to break down the estimated average cost for Kansas for 1937 ($.97) into size groups, the results being illustrated by the dotted line in the right half of Figure 1.

The average sales price of crude oil in Kansas in 1934 was $1.03 per barrel, the range being from about $0.95 to $1.05. The average for Kansas closely approximates the average posted price for 37-37.9 gravity crude, which for 1937 was $1.23. This average is represented by the dashed line in the right half of Figure 1. Examination of the intervals between the dotted and dashed lines in the right half of Figure 1 indicates that the average small stripper operator is "losing" money if his average output is less than 1 bbl. per day. On the other hand, the average indicated profit from the comparatively few wells producing in excess of 100 bbls. daily was about $0.40.

Louisiana Gulf Coast

In most respects the fields of coastal Louisiana vary radically from those in Kansas. For example, comparatively few wells in Kansas are more than 4,000 feet deep, whereas 10,000-foot wells are becoming common in southern Louisiana. In structural formations, they are also unlike, Louisiana having salt domes, Kansas every other common type but that. Kansas crude oil is of high average quality and price, whereas crude from the Louisiana Gulf Coast is lower in gravity, higher in sulfur, and of lower value.

As with Figure 1 for Kansas, Figure 2 portrays for the Louisiana Gulf Coast the distribution of production, wells, "profits" and "losses" by size groups. The left half depicts conditions as of 1934, the right half estimates for 1937.

A striking disclosure in the left half of Figure 2 is the fact that practically all of the production in 1934 came from wells of the largest class, those producing more than 27 bbls. per day. These wells were apparently the only profitable ones at that time. The right half of Figure 2 indicates the bulk of production in 1937 coming from wells producing between 200 and 500 bbls. per day, but an appreciable percentage of the output comes from wells producing more than 500 bbls. per day.

Producing wells in coastal Louisiana are numbered in the hundreds rather than in the thousands as in Kansas. There were about 1,100 producing wells in the district at the close of 1937, about 500 of which were in the 200-500-bbl. group.

Cost estimates: There is no necessity for repeating the details of how the cost items for coastal Louisiana were arrived at, hence only the highlights of the estimates will be mentioned.

The reserve estimates for the Louisiana Gulf Coast have increased several fold in recent years. Some of this resulted from the development of new leases, but a material part represented allowances for deeper sands, extensions, and higher percentage recovery. As reserves have been marked up depletion allowances have come down so that $.02 per barrel for 1937 appears reasonable in comparison with $.023 reported by the P.A.B. in 1934. Investment in tangible equipment in the Louisiana Gulf Coast more than tripled between 1934 and 1937, chiefly by reason of equipping about 750 wells at a cost of about $21,000 each. From these basic data it may be computed that the average depreciation per barrel for 1937 was about 8 cents per barrel. This was somewhat below the average in 1934 ($.089) due to the rapid increase in production and reserves. The number of oil wells completed in the Louisiana Gulf Coast increased only from 250 in 1934 to 273 in 1937, but the average depth probably increased several thousand feet in that period. The average cost of drilling these wells was about $35,000. From this point the calculations are largely controlled by whatever estimates are used for reserves in the district. However, what scanty data as are available point to an average intangible development cost of about $.09 per barrel, compared with $.065 in 1934. As in Kansas, a material gain in costs of labor and supplies was probably outweighed by an even larger increase in production. The labor cost probably doubled mainly because of greater employment, but partly because of higher average wages. Although the trend in average operating costs was upward (see Table 2) it was thought best to retain the 1934 average of $.22 for 1937. Dry-hole expense in the Louisiana Gulf Coast is high, probably the highest single item in all costs, certainly the highest in overhead. There were 170 dry holes drilled in the Louisiana Gulf Coast in 1937, compared with 118 of shallower depth in 1934. From this it may be inferred that the total dry-hole cost doubled between 1934 and 1937. Possibly other overhead costs, such as salaries and office expense, engineering costs, etc., may also have doubled. However, the production nearly tripled so that the average for overhead has been reduced to $.28 from $.322 in 1934.

The items for miscellaneous revenue and interest were left unchanged so that the estimated net cost for the Louisiana Gulf Coast for 1937 is $.705, or about 5 cents below the average cost in 1934. As in Kansas, the average sales price of Louisiana Gulf crudes in 1937 was 15 or 20 per cent higher than in 1934; that is, the average for 1937 is estimated as $1.15 per barrel, compared with $.99 in 1934.

The break-down of the average cost in 1937 ($.705) by size groups is illustrated in the right half of Figure 2. From this figure it may be inferred that only a handful of wells in Louisiana Gulf Coast were operated at a loss in 1937.

West Virginia

The producing oil wells of West Virginia are uniformly small pumpers, with comparatively few (about 500 out of nearly 19,000) making more than 1 bbl. per day. In both 1934 and 1937 the average production per well per day was .6 bbl. The regional structure of West Virginia consists mainly of anticlinal ridges paralleling a major geosyncline. The wells vary in depth from about 100 feet to 4,000 feet, the average probably being less than 2,000 feet.

In Figure 3 are given production and well data for West Virginia, broken down by groups in the same manner as in Figures 1 and 2 for Kansas and Louisiana Gulf Coast, respectively. The only significant change in the breakdown of production between 1934 and 1937 appears to be that the size of .2-.49 bbl. per well per day has increased at the expense of the 1.0-2.9 bbl. group. The right half of Figure 3 illustrates the close relationship between number of wells and production, this being due to the small variations in average production per well per day.

Little has been uncovered in the shape of new reserves in West Virginia since 1934, hence the average amortization rates would show little change. Thus the estimates of average depletion, depreciation, and development of $.05, $.35, and $.09, respectively, were obtained simply by projecting the trends evidenced between 1931 and 1934 (see Table 3).

Due principally to higher wage rates operating costs in West Virginia probably increased 10 per cent between 1934 and 1937. Combined with the decline in production this probably raised the average from $1.35 in 1934 to $1.55 in 1937. The number of dry holes increased from 96 in 1934 to 118 in 1937, which, with increased salaries, taxes, etc., suggest an increase in average overhead cost. Accordingly, this has been raised from $.351 in 1934 to $.38, which was the average for the period 1931-1934. Gas sales constitute an appreciable revenue for oil producers in West Virginia, the average value at wells being (1936) 15 cents per thousand cubic feet, compared with only 5 cents for Kansas and 3 cents or less for Louisiana Gulf Coast. However, this average well value has declined since 1934 so that the revenue per barrel from gas sales probably decreased to at least $.35 in 1937.

The total investment in oil production in West Virginia has been declining, in other words, not enough wells are being drilled to compensate for amortization. Thus in 1935 the amortization was about $1,700,000 but new capital was only about $600,000. Drilling increased in 1936 and again in 1937; nevertheless, interest charges continued to decline so that the average for 1937 was about $.23 per barrel, compared with $.28 in 1934.

The average net cost per barrel in West Virginia in 1937 is therefore estimated as $2.30. The average sales price of West Virginia crude in 1937 was about $2.28, indicating that the average barrel was produced at a slight loss (2 cents) in that year. On September 1, 1937, the posted price of the most representative grade of crude oil was lowered from $2.52 to $2.25; on October 12 and December 1 additional reductions of $.25 and $.18, respectively, were made. On March 7, 1938, the price was reduced to $1.65; on June 13, 1938, it was further reduced to $1.40, or $.90 below the estimated average cost of production.

Rocky Mountain Area

By
T. R. INGRAM

Big Medicine Bow Southern Limits Defined by Dry Hole

DENVER, Colo., July 11.—The Cunningham Oil Co., Inc. test on the Oil Springs structure, Carbon County, Wyoming, which opens a new gas field, gauged 55,000,000 on final test. Southern limit of production in the Big Medicine Bow field was defined in Ohio Oil Co.-California Co. No. 3 State-Griffin, which was abandoned. They will make a Tensleep test in another well higher on structure. General Petroleum Corp. made a location for its second test on Cole Creek, 1 mile north of the discovery. Western limit of Leo sand production was defined in Hewitt Brothers and Manning No. 1 Pecklow in Lance Creek, which was abandoned. Texas Co. completed a small well in the LaBarge field. Wyoming had three new operations.

One well, shut in since last fall, was abandoned in Colorado in the South Park Oil Co. No. 1 State, Hartsel district.

Cut Bank had two completions and Kevin-Sunburst one in Montana, all average wells. R. C. Tarrant's test of the Roscoe dome, Carbon County, went through a fault and was abandoned. One new operation was spotted in Cut Bank.

Nebraska has two new operations getting under way.

NEW MEXICO

Two of the four completions in Lea County the past week were in the Vacuum district. Larger of the new Vacuum producers was Texas Co. No. 2-Q State, C SW SE section 25-17-34. It had natural flow of 387 bbls. of oil in seven hours through three-fourths inch choke on tubing. Production was from pay topped at 4,475 feet, total depth 4,750 feet.

The other Vacuum completion was Republic Production Co. No. 1 State, C NW SW section 32-17-35, near the northeast edge of the pool. It found pay at 4,385 feet, was bottomed at 4,525 feet in lime, and flowed 82 bbls. of oil naturally in two hours through 1-inch choke on tubing. Best pay was found at 4,423-4,515 feet.

In the Monument district, Two States Oil Co. No. 2 Etcheverry, NE NW SE section 10-20-36, topped pay at 3,756 feet, total depth 3,886 feet, plugged back to 3,804 feet, was shot and acidized and flowed 10 bbls. of oil in 18 hours, cutting 8 per cent water. Gas gauged 1,410,000 feet.

One completion was recorded in the Eunice area. It was Shell Petroleum Corp. No. 2-C State, NE SE NE section 24-21-35. It flowed 13 bbls. of oil an hour, with 430,000 feet of gas, from pay at 3,924-26 feet, total depth.

Two wells were completed in Eddy County, a producer in the Jackson pool and a wildcat failure in the southern part of the county.

Danciger Oil & Refining Co. No. 4-A Turner, C SW SW section 18-17-31, Jackson district, found pay at 3,430 feet, was bottomed at 3,522 feet, and flowed 225 bbls. of oil naturally in 24 hours.

Paul Moran No. 1 Crawford & Smith, NW NW SW section 24-24-26, wildcat about 16 miles south and slightly west of Carlsbad, was bottomed at 2,005 feet in sand, salt water intruded at the rate of 2 bbls. an hour and it was abandoned.

Lea County

Addison Oil Co. No. 2 Knight, C SW NW sec. 27-24-37. T.D. 3,560 ft.; P.B. 3,538 ft.; tstg.
Amerada Pet. Corp. No. 3 State, C NE SW sec. 23-17-34. T.D. 1,644 ft.; cmtg.
Anderson-Prichard Oil Corp. No. 2 Carlson-Harrison, NW NE SE sec. 22-25-37. R.U.R.
Anderson-Prichard Oil Corp. No. 1 Stuart, C W½ SW NE sec. 10-25-37. Drlg. 2,627 ft.
Anderson-Prichard Oil Corp. No. 2 Wells, C SW SE sec. 5-25-37. T.D. 3,506 ft.; rng. tbg.; F. 5 B.O.P.H. for 10 hrs. with est. 500,000 ft. gas.
Cities Service & Repollo No. 3 Brunson, C SW SE sec. 4-22-37. Drk.
Continental Oil Co. No. 1 Elliott, C NE NE sec. 17-22-37. Drlg. 265 ft.
Continental Oil Co. No. 1 State I-7, NE NW NE sec. 7-17-34. Loc.
Continental Oil Co. No. 1 State K-29, C SW SW sec. 29-16-37. Drlg. 4,209 ft.
Continental Oil Co. No. 4-E-17 state, C SW NW sec. 17-22-36. T.D. 3,880 ft.; P.B. 3,850 ft.; reshot at 3,751-3,850 ft.; F. 2½ B.F.P.H., 30 per cent wtr.
Culbertson & Irwin No. 1 Dabbs, NE NE NW sec. 35-25-37. T.D. 3,331 ft.; fsg.; 200 ft. O.I.H. in 48 hrs., est. 1,000,000 ft. gas.
Culbertson & Irwin No. 1 Henry, C N½ NW SW sec. 26-25-37. Drlg. 3,125 ft.
Culbertson & Irwin No. 3 Liberty, C N½ NW SW sec. 3-25-37. T.D. 3,468 ft.; F. 168 B.O.P.D.; still tstg.
Great Western Prod. Co. No. 1 Leonard, C SE NE sec. 32-23-37. Loc.
Great Western Prod. Co. No. 1-C State, C NE SW sec. 7-19-37. T.D. 4,081 ft.; P.B. 4,070 ft.; shot and F. est. 75 B.O.P.D.; retreated and C.O.
Gulf Oil Corp. No. 1 Alley, C NE SE sec. 10-23-37. T.D. 3,713 ft.; P.B. 3,688 ft.; S.D.O.
Gulf Oil Corp. No. 2-D Kutter, C SE SW sec. 8-19-37. T.D. 4,155 ft.; P.B. 4,100 ft.; shot and C.O. at 4,032 ft.
Gulf Oil Corp. No. 5 McCormack, C SW NE sec. 32-21-37. T.D. 296 ft.; W.O.C.
Gulf Oil Corp. No. 1-E Mattern, C NW SW sec. 1-22-36. Drk.
Gulf Oil Corp. No. 3 Ramsey, C SW SE sec. 35-21-36. Drlg. 3,072 ft.
Gulf Oil Corp. No. 4 Stuart, C NW NE sec. 10-25-37. Drlg. 2,680 ft.
Humble O. & R. Co. No. 6 Fopeano, C NE NE sec. 35-20-36. Drk.
Magnolia Pet. Co. No. 2 Brunson-Argo, C NE NE sec. 9-22-37. Drlg. 3,125 ft.
Magnolia Pet. Co. No. 1 Corrigan, C SW SE sec. 33-21-37. R.U.R.
Magnolia Pet. Co. No. 1-L State, C SE SW sec. 21-17-35. C.&P.
Magnolia Pet. Co. No. 6 State-Bridges, C SW NW sec. 23-17-34. T.D. 4,755 ft.; tstg.
Magnolia Pet. Co. No. 9 State-Bridges, C SE SW sec. 13-17-34. Drlg. L. 4,446 ft.
Magnolia Pet. Co. No. 10 State-Bridges, C SE NW sec. 25-17-34. T.D. 4,366 ft.; W.O.C.
Magnolia Pet. Co. No. 11 State-Bridges, C SE NW sec. 25-17-34. T.D. 4,150 ft.; W.O.C.
Magnolia Pet. Co. No. 12 State-Bridges, C SE SE sec. 26-17-34. Drlg. 2,907 ft.
Maljamar O. & G. Co. No. 9 Baish, C NW NW sec. 21-17-32. T.D. 4,145 ft.; est. 20 B.O.P.D.; to treat.
Maljamar O. & G. Co. No. 10 Baish, C SW NW sec. 22-17-32. Drlg. 3,690 ft.; S.O.
Maljamar O. & G. Co. No. 4 Mitchell, C NE NE sec. 20-17-32. Drlg. 4,080 ft.
Maljamar O. & G. Co. No. 5 Mitchell, C NW NW sec. 19-17-32. Drlg. 3,708 ft.; S.O.
Jas. A. Mascho No. 2 Cloyd, C SW SW sec. 20-22-33. Drlg. 1,020 ft.
C. T. McLaughlin No. 1 Polhamus, NE sec. 9-24-37. T.D. 3,672 ft.; S.D.O.
Mid-Continent Pet. Corp. No. 3 Marshall, SW SW SW sec. 12-21-36. Drlg. 3,080 ft.
Ohio Oil Co. No. 1 State-Fleming, NE cor. sec. 2-26-37. T.D. 3,331 ft.; top pay 3,268 ft.; flwd. 30 B.O. in 8 hrs.; P.O.P.
Ohio Oil Co. No. 1 State-McCallister, C SE SW sec. 25-17-34. Drlg. 4,423 ft.
Olean Pet. Co. No. 1 Ferrel, C NE SE sec. 22-22-37. C.&P.
Parker Drlg. Co. No. 2 Irwin, C W½ NW SW sec. 25-24s-37. Drlg. 3,425 ft.; S.O.&G.
Parker Drlg. Co. No. 1-A State, C SW SW sec. 21-22-37. R.U.S.T.
Paton Bros. No. 2 Wilkinson, C SE SE sec. 8-18-31. Loc.
Penrose & Rowan No. 1 Christmas, SE cor. sec. 28-22-37. Drlg. 2,470 ft.
Lem Peters No. 1 T. O. May, C NW NE sec. 34-22s-37. T.D. 3,700 ft.; C.O. at 3,665 ft.; flg. by heads.
Lem Peters No. 2 L. J. May, C W½ SE SE sec. 27-22-37. Tstg. 3,639 ft.
Phillips Pet. Co. No. 3 Santa Fe, C SW NW sec. 5-18-35. C.&P.
Phillips Pet. Co. No. 7 Santa Fe, C SE SW sec. 27-17-35. T.D. 3,157 ft.; hole caving; C.O.
Phillips Pet. Co. No. 8 Santa Fe, C NW NW sec. 5-18-35. Drlg. 1,860 ft.
Phillips & Pure No. 2 Woolworth, C NE SE sec. 33-24-37. T.D. 3,539 ft.; F. 180 B.O.P.D.; now tstg.
Repollo Oil Co. No. 2 Hair, NW SW NW sec. 9-24-37. T.D. 3,380 ft.; well burned down; S.D.R.
Repollo Oil Co. No. 2 Turner, SW NE SW sec. 29-21-37. Drlg. 1,300 ft.
Repollo Oil Co. No. 5-B Whitten, NW NW NE sec. 4-24-36. T.D. 3,725 ft.; to P.B.
Republic Prod. Co. No. 2 State, C SW SW sec. 32-17-35. Loc.
Rowan & Nichols No. 1 State, C NE NW sec. 22-10-37. Drlg. 4,252 ft.
Rowan Drlg. Co. No. 2-A Elliott, C NE SW sec. 27-22-37. T.D. 3,665 ft.; swb. 15 B.O. in 15 hrs.
J. M. Rush No. 2 State, NW NW SE sec. 20-20-37. T.D. 201 ft.; W.O.C.
J. M. Rush No. 2 Wantz, C NW SW sec. 21-21-37. T.D. 3,775 ft.; F. 29 B.O.P.D.; 1,300,000 ft. gas.
Harry J. Schafer No. 1-A State, C E½ NW NE sec. 26-20-36. T.D. 3,865 ft.; swb. some oil; P.B. 3,845 ft.; S.I.
Shasta Oil Co. No. 2 Woolworth, NE NW NW sec. 28-24-37. T.D. 3,155 ft.; drlg. by tools at 3,132 ft.
Shell Pet. Corp. No. 4 McKinley, SE SE SW sec. 19-18-38, O.W.D.D., O.T.D. 4,194 ft.; T.D. 4,240 ft.; tstg.
Shell Pet. Corp. No. 4-E State, C SW NW sec. 12-20-36. Drlg. 3,800 ft.
Shell Pet. Corp. No. 3-A State, C SE NE sec. 31-17-35. Rng. csg. at 1,540 ft.
Shell Pet. Corp. No. 1-D State, C SW SW sec. 31-17-35. R.U.R.
Shell Pet. Corp. No. 3-H State, C W½ SE NE sec. 13-21-35. Drk.
Shell Pet. Corp. No. 1 Whitten, C S½ SE NE sec. 33-23-36. T.D. 1,483 ft.; W.O.C.
Skelly Oil Co. No. 7 Coats, C NW SW sec. 3-24-36. T.D. 3,583 ft.; F. 10 B.O. in 13 hrs.; tstg.
Stanolind O. & G. Co. No. 3-A Hill, SE SE NW sec. 6-21-37. Drlg. 3,555 ft.
Stanolind O. & G. Co. No. 4-B Langlie, C NW SW sec. 14-25-37. Loc.
Stanolind O. & G. Co. No. 5-B Myers, C NE SW sec. 9-24-37. T.D. 3,530 ft.; est. 16,000,000 ft. gas treated; now S.I.O.
Standard Oil Co. of Texas No. 1 State, C SW NW sec. 32-17-35. Drlg. 4,110 ft.
W. H. Street No. 2 Farrell, C NW SE sec. 22-22s-37. T.D. 3,689 ft.; S.G. 3,460 ft.; S.O. 3,535 ft.; ran 2-in. to 3,630 ft.; I.C. 3,530; testing.
Texas Co. No. 3 Black, C NW NE sec. 21-24-37. Drlg. 3,470 ft.
Texas Co. No. 2 Cagle, SW NE NW sec. 9-26s-37. Drlg. 2,668 ft.
Texas Co. No. 1 Corbin, C NW SW sec. 10-18-33. T.D. 5,117 ft.; P.B. 4,259 ft.; swbd. 52 B.O. in 12 hrs.; to test.
Texas Co. No. 3 J. S. Lea, SW NE SW sec. 14-20-34. T.D. 1,585 ft.; W.O.C.
Texas Co. No. 1-N State, C SW SW sec. 30-17-35. C.O. to 4,747 ft.; P.B. 4,700 ft.; S.D.O.
Texas Co. No. 2-D State, C SW NW sec. 27-17-34. Drlg. wtr. well; drlg. 4,636 ft.
Texas Co. No. 1-Q State, C SE SE sec. 25-17-34. T.D. 4,100 ft.; W.O.C.
Texas Co. No. 4-O State, C NE SE sec. 36-17-34. Drlg. 810 ft.
Texas Co. No. 5-O State, C SE NW sec. 36-17-34. W.O.C. 275 ft.
Texas Co. No. 6-O State, C NW SE sec. 36-17-34. Drlg. 160 ft.
Texas Co. No. 1-R State, C NE NE sec. 6-18-35. Loc.
Texas Co. No. 2-R State, C NW NE sec. 6-18-35. W.O.C. 285 ft.
Twin Drlg. Co. No. 1 Corrigan, C SW NE sec. 4-22-37. T.D. 3,763 ft.; treated and F. 112 B.O.P.D.; tstg.
Twin Oil Co. No. 1 Joyce-Pruitt, C SE SE sec. 31-21-37. Drlg. 1,785 ft.
Twin Oil Corp. No. 2 Corrigan, C NE NE sec. 4-22-37. C. & P.
Two States Oil Co. No. 1-B Cole, O.W.D.D., C NE NE sec. 16-22-37. O.T.D. 1,141 ft.; drlg. 3,610 ft.; S.G.
Two States Oil Co. No. 1 Hill, C SW SW sec. 31-20-38. T.D. 290 ft.; W.O.C.
Weier Drlg. Co. et al No. 1 Woolworth, NE NE SW sec. 28-24-37. Drlg. by tools at 2,775 ft.
Sam Weiner No. 1 Smith, NE cor. sec. 4-25-37. Drlg. 3,125 ft.
Weiner No. 1 Parcell, C SW NE sec. 8-23-28. T.D. 4,498 ft.; S.D.O.
Western Gas Co. No. 1 Matkins, C SE SE sec. 15-23-26. T.D. 3,853 ft.; 4,000,000 ft. gas; small amount of fluid.

Eddy County

F. E. Baker No. 1 Eddy, NE sec. 12-22-27. T.D. 2,410 ft.; S.D.O.; W.I.H.
Danciger O. & R. Co. No. 1-B Turner, CEL NE SE sec. 17-17-31. Loc.
D. & B. Oil Co. No. 3 Jenkins, NE NE NW sec. 20-17-30. T.D. 3,300 ft.; swb. 20 B.O.P.D. through tbg.
English & Harmon No. 1 Dougherty, NE NE SW sec. 3-17-27. T.D. 1,050 ft.; fsg.
Etz Bros. No. 5 State, SE NE SE sec. 16-17-30. R.U. and S.D.
C. J. Frederick No. 1 Reed, C NE SW sec. 28-24-28. T.D. 2,770 ft.; S.D.O.
F. W. & Y. Oil Co. No. 3 Jackson, C NW SE sec. 13-17-30. T.D. 2,953 ft.; fsg.
Fullerton Oil Co. No. 1-A Johnson, C SE NW sec. 35-16-31. Loc.
Grayburg Oil Co. No. 12 Burch, NW NW SE sec. 19-17-30. R.U. and S.D.
H. A. Hartwell No. 1 Vandagrift, NE NE SE sec. 8-18-27. T.D. 2,085 ft.; S.D.
R. L. Holcomb No. 1 State, NW sec. 22-17-28. T.D. 1,980 ft.; S.D.O.
C. F. Ingram No. 1 Page, NE NE SW sec. 15-21-28. Drlg. 1,990 ft.
F. G. Keyes No. 2 State, C SE NE sec. 9-17-28. T.D. 600 ft.; S.D.R.
Harry Leonard No. 1 Texas, NW NW NE sec. 36-16-31. Drlg. 1,045 ft.
Nash, Windfohr & Brown No. 5-A Stevens, C SE SW sec. 13-17-30. T.D. 2,485 ft.; S.O.&G.
Paton Bros. No. 2 Ginsberg, C SE SE sec. 8-18-31. T.D. 3,172 ft. sd.; est. 75-100 B.O.P.D.; S.I. for storage.
Premier Pet. Co. No. 1-B Maddren, NW SW SW sec. 27-17-30. Drlg. 3,086 ft.
Repollo Oil Co. No. 3-C McIntyre, NW SE NE sec. 20-17-30. Drlg. 3,195 ft.
Repollo Oil Co. No. 4-A Parke, NW SE NW sec. 22-17-30. T.D. 3,090 ft.; fsg.
Rudco O. & G. Co. No. 5 Yates, C NE NW sec. 33-18-28. Drlg. 2,350 ft.
W. A. Snyder No. 1 Pecos Irrigation, C NE SE sec. 15-25-28. T.D. 3,330 ft.; S.D.O.
V. P. Welch No. 1 Lewis, SE SW SE sec. 5-16-28. Drlg. 2,050 ft.
Western Drlg. Co. No. 2-A Western, SE SE NW sec. 23-17-29. T.D. 390 ft.; rng. csg.
Yates-Dooley No. 1 Creek, C SW NE sec. 35-18-30. S.D.R. at 185 ft.

Chaves County

E. J. Fisher No. 1 Etz Permit, NE sec. 23-7s-26. Drlg. 1,985 ft.
E. J. Fisher No. 1 Foster, C NW NW sec. 7-15-26. Drlg. 460 ft.
Grastorf & Caudill No. 1 Smith, C NE NE sec. 1-4s-29. Wildcat; new hole; T.D. 3,335 ft.; W.O. casing.
Interstate Minerals, Inc., No. 1 Dunigan, NW cor. sec. 15-15-30. Drlg. 600 ft.
J. & L. Drlg. Co. No. 2 Hurd, SW sec. 11-11-26. T.D. 1,000 ft.; S.D.O.

Colfax County

Winston Marks No. 1 State, SE NW sec. 5-25-24. Set 12½-in. csg. 1,200 ft.; drlg.

De Baca County

Land Owners Oil Co. No. 1 McAdoo, SW cor. sec. 16-1s-7e. O.W.; prep. to deepen from 5,850 ft.; D.&A. 5,850 ft.
James D. Ward No. 1 Summers, NW NE SW sec. 17-4n-20. T.D. 260 ft.; S.D.
N. F. Woods No. 1 Jones, C NE SW sec. 17-4n-20. Drlg. 38 ft.

Dona Ana County

Jules C. Bertrand No. 1 Casad Permit, sec. 24-26-5e. T.D. 47 ft.; S.D.O.

McKinley County

S. Dysart No. 1 Govt., NE sec. 14-14-10w. T.D. 1,390 ft.; fsg.

Otero County

Fred Turner, Jr., No. 1 Ella Everett, C SE SE sec. 34-22-13. Drlg. 3,713 ft. L.
Fred Turner, Jr., No. 1 H. V. Everett, SE SE sec. 28-22-13. S.D. 3,710 ft.

Quay County

H. H. McGee No. 1 Chapman, sec. 9-9-35e. Drlg. 1,000 ft.

Roosevelt County

C. S. Peterson and Conquistadores Oil Co. No. 1 Good, NW SE SE sec. 28-5s-30. T.D. 980 ft.; S.D.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 North Albuquerque, NE SE NW sec. 10-11n-4e. T.D. 3,750 ft.; C.O. to run 6⅝-in.

McKinley County

Claude Walker No. 7 fee, SW SW SE sec. 20-20n-9w. Drlg. 250 ft.

Rio Arriba County

Oil City Petroleum Co. has begun spudding a test on the Azotea dome, 8 miles west of Chama and across the line from the operations in Archuleta County, Colorado. The company has a block of 5,000 acres. First objective will be the Dakota expected at around 600 feet, but will go deeper.

Oil City Pet. Co. No. 1 Azotea, SW SW NE sec. 11-31n-2e. Spdg.

San Juan County

Frank Lischke No. 1 Abreo, SW SW section 27-30n-11w, Aztec-Bloomfield district, was completed as a small gas well at 1,140 feet after plugging back from 1,460 feet where it had salt water.

Continental Oil Co. No. 77 Rattlesnake, NE NE NE sec. 2-29n-19w. Spdg. 40 ft.
Goodrun & Vincent No. 2 Goodrun, SE SW NE sec. 23-29n-11w. T.D. 30 ft.; W.O. csg.
Al Greer No. 2 fee, SW SE SW sec. 10-30-11w. S.D. 660 ft. for 10-in.
Anna Oil Corp. No. 6 Govt., SW NE NE sec. 33-30n-11w. Drlg. 1,900 ft.

Socorro County

Central New Mexico Oil Co. No. 1 Belen Gr., SE NW sec. 16-3n-1e. T.D. 2,965 ft.; (C.D.); C.O.

Torrance County

Chief Oil & Gas Co. No. 1 Pace, SW NW SE section 12-6n-7e, was completed at 2,062 feet for 1,000,000 feet of carbon dioxide gas. Well will be shut in awaiting a market for the gas which is used extensively in that area for the manufacture of dry ice.

Woolston Bros. No. 1 Garland, NE SE NE sec. 32-7n-7e. R.U.
Estancia Valley Carbon-Dioxide Dev. Co. No. 1 Crawford, SE NE NE sec. 32-7n-7e. Drlg. 900 ft.; 10¾-in. at 431 ft.

Valencia County

Old Spanish Grants, Inc., No. 1 San Clemente, C SE SW sec. 23-7n-1e. R.U.R.
C. A. Grober et al No. 1 Fuqua, NE NE sec. 19-5n-3e. T.D. 900 ft.; R.U.R.

COLORADO

Archuleta County

Boone Dev. Co. No. 1 Newton, SE NW SE sec. 18-33n-1e. S.D. 303 ft. to run 10-in. and drill W.W.
Pagosa Oil & Dev. Co. No. 1 Macht, C sec. 32-36-1w. T.D. 1,455 ft.; U.R. 10-in. to bttm.

Fremont County

Stanley Thomas No. 1 Rickwalt, SE SE sec. 2-19s-70w. Drlg. Pierre sh. 480 ft.

Garfield County

Roaring Fork Oil Co. No. 1 Patterson, C NE sec. 36-7s-88w. S.D. 875 ft. (C.D.) for csg.

Grand County

Interstate O. & R. Co. No. 1 Hinman, NE SE NW sec. 11-2n-81w. S.D. 3,920 ft.; will D.D. to Morrison.

Huerfano County

J. G. Tompkins & Sons No. 1 Pressey, NE NE NE sec. 10-29s-69w. S.D. 411 ft.; (prospecting for coal).

S. W. Pressey No. 2 Alamo, C SW SE sec. 3-27s-68w. S.D. 1,320 ft.

LaPlata County

N. Spatter No. 1-X Bryce, SE SW SW sec. 31-33n-9w. Drlg. 850 ft.; 10-in. at 700 ft.

Mesa County

Continental Oil Co. et al No. 1 Miller, SW SW NW sec. 36-8s-91w. Cmtd. 9⅝-in. at 4,236 ft.; W.O.C.

Moffat County

Stanolind O. & G. Co. No. 3-SD Shaw, NW NE NE sec. 27-4n-92w. T.D. 3,662 ft.; tstg.
Morapas Pet. Corp. No. 1 Coles, SW SW SE sec. 1-3n-92w. S.D. 2,750 ft. for 8¼-in.
C. R. Privett No. 1 Sutton, NE NE SW sec. 1-5n-96w. Cmtd. 12½-in. at 380 ft.; 35 sacks.

Montezuma County

McElmo Oil Co. No. 1 West, NE NW NW sec. 31-36s-17w. Drlg. 4,666 ft. in L.

Park County

South Park Oil Co. No. 1 State, SE SE SW section 16-11s-75w, Hartsel district, which has been shut down since last fall at 5,705 feet, is pulling pipe to abandon on account of bad hole. It had a number of oil and gas shows, some of which probably would have been commercial could they have been saved.

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75w. Drlg. 5,900 ft. in sh. and shells.

Prowers County

Continental Oil Co. No. 1 Ruby, C NE NW sec. 31-21s-44w. T.D. 4,070 ft.; rec. D.P.; recond. hole.

Pueblo County

Eden O. & G. Co. No. 1 Horse Creek, SW SE sec. 29-19s-64w. R.U.
C. E. Puckett No. 1 Barber, NW sec. 35-21s-66w. S.D. 475 ft.

Routt County

Craig & Moore No. 1 Erwin, C SW NE sec. 33-7s-85w. T.D. 1,042 ft.; U.R. 10-in. to set on bttm.

Rio Blanco County

Buford Oil Co. No. 1 Govt., C SW SW sec. 16-1n-91w. S.D. 2,430 ft. for 8¼-in.

WYOMING

Albany County

Murphy Oil Co. No. 13 Holst, SE SW NE sec. 13-17n-77w. Drlg. below 1,413 ft.

Big Horn County

Prescott & Mileski No. 1 Govt., NE NW SW sec. 15-1n-93w. Drlg. 536 ft.
Clifford S. Johnson No. 1 Johnson, CEL NW NW sec. 24-51n-93w. Rig; W.O. engine.
Joan Oil Co. No. 1 Howell, NE NW NE sec. 32-55n-97w. T.D. 2,420 ft.; cmtd. 10-in. on bttm.; W.O.C.

Carbon County

Cunningham Oil Co., Inc. No. 1 Union Pacific-Cronberg, SE NE SE section 3-23n-79w, which opened a new gas field in the Sundance on the Oil Springs structure, made 55,000,000 feet with a rock pressure of 1,100 pounds on final gauge. It was completed in the basal Sundance at 2,315 feet with the 7-inch cemented at 2,232 feet.

Ohio Oil Co. and California Co. No. 3 State-Griffin, C SW NW section 36-21n-79w, Big Medicine Bow field, was plugged and abandoned at 5,711 feet, total depth, after plugging back to test the Muddy at 5,235-75 feet. Drill stem test in the Sundance at 5,694-5,711 feet showed 60 bbls. of water and in the Muddy 30 bbls. of water. Elevation 7,189 feet. This well marks the limits of Sundance production on the south, being a south offset to No. 2 State, a producer in the Upper Sundance, but which carried water in the basal Sundance. It was started as a test to the Tensleep, but was found to be running better than 300 feet lower than its north offset. Instead, the operators will go back into their No. 3-A Kyle, C SW NE section 26-21n-79w, on the west side, two locations west of the discovery, and deepen it to the Tensleep. It was completed last fall at 5,643 feet for 10 bbls. per hour after plugging back from 5,748 feet.

Ohio Oil Co.-California Co. No. 3-A Kyle, C SW NE sec. 26-21n-79w. T.D. 5,643 ft.; R.U. to D.D.
Producers Oil Co. No. 1 Lake Valley, 200 ft. S of CNL sec. 14-20n-88w. Drlg. 1,916 ft.
Ohio Oil Co. No. 3 Hazlett Est., NE SW SE sec. 34-23n-79w. Drlg. 4,126 ft. in sd.

Converse County

Wyshawn Oil Co. No. 2 Lindley, C SW SW sec. 35-32n-69w. T.D. 500 ft.; fsg.
Sand Creek Oil Co. No. 1 Probesh, NW SW SE sec. 29-32n-69w. T.D. 633 ft.; prep. to test.
Fred Bunker No. 1 Pestal, SE NE NE sec. 32-32n-69w. Drlg. 200 ft.; 10-in. at 170 ft.
New Era Fuel Co. No. 2 Mary Gasper, CNL NW SW sec. 25-32n-69w. Est. 50 B.P.D. from sd. in base White River at 655-70 ft.; W.O. pump.
Wyshawn Oil Co. No. 1 Lindley, NW SE SE sec. 34-32n-69w. T.D. 1,500 ft.; fsg. bailer.

Fremont County

Tropic Oil Co. No. 1 Govt., C SE SW sec. 34-27n-90w. Drlg. 3,368 ft.
Consolidated Oil Properties No. 3 Ewart, C SW SE sec. 16-1n-1w. Drlg. 834 ft.
Sinclair-Wyoming Oil Co. No. 2-B Muskrat, NW NW NE sec. 4-33-92w. T.D. 5,320 ft.; cmtd. 5½-in. at 5,319 ft.; will test gas in 1 ft. of sd. between csg. and bttm. before perf.

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Ben Stewart No. 1 Darnell, NE SE sec. 26-3n-1w. S.D. 2,245 ft. for 7-in.

Hot Springs County

Italo Pet. Co. No. 1 Skelton-Govt., SE SW NE sec. 13-44n-98w. T.D. 300 ft.; R.U.C.T.
J. W. Bales No. 1 Govt., SE SW sec. 28-43n-93w. T.D. 1,082 ft.; P.B. to 1,015 ft.; tstg.
D. D. Gibson No. 26 fee, SW NW SE sec. 35-43n-93w. Drlg. 711 ft.
California Expln. Co. No. 1 Govt., NE SE NE sec. 12-44n-97w. T.D. 4,070 ft. in new hole in sat. Tensleep: prep. to set 6⅝-in. and test.

Lincoln County

H. C. Harris et al No. 1 Govt., SE NW NW sec. 23-21n-117w. Drlg. 500 ft.

Natrona County

General Petroleum Corp. has staked location and is laying water line for its No. 1 State, NW NE SE section 16-35n-77w, on the Cole Creek structure 14 miles northeast of Casper, 1 mile north of its No. 1 Government, C NW SE section 21-35n-77w, the discovery well, which is pumping an average of 10 bbls. per hour from the Lakota sand at 8,019 feet, total depth. Since being put on the pump it has put 6,000 bbls. in the tank. It is being transported by truck to the Socony-Vacuum refinery 9 miles away. Company equipment will be used in the second test and will include a 136-foot derrick. The main objective will be the Wall Creek sand, which showed some production in the discovery well, but may go down to the Sundance, which was not tested in No. 1 Government.

General Pet. Corp. No. 1 State, NW NE SE sec. 16-35n-77w. M.I.M. (first report).
Stanolind O. & G. Co. No. 26 T.P.-Wyo. Asso., C SE SW sec. 26-40n-79w. Cg. 3,461 ft.
Stanolind O. & G. Co. No. 8 T.P.-Midwest Oil, C NW SW sec. 35-40n-79w. Loc.; W.O. compl. No. 26.
Stanolind O. & G. Co. No. 26 T.P.-Wyo. Asso., C SE NW sec. 35-40n-79w. T.D. 4,002 ft.; cmtd. 6⅝-in. at 3,995 ft.; tstg.

Niobrara County

Hewitt Brothers and Manning No. 1 Elsie Pecklow, SE cor. section 1-35n-66w, an outpost well on the west side of Lance Creek, was plugged and abandoned after encountering water in the top of the Leo sand at 5,635 feet. It was drilled to 5,667 feet and then plugged back to the Dakota at 3,475 feet, where a test was made before abandoning. It had the red marker at 5,548 feet, indicating that it was running 217 feet lower than C. L. Price No. 1 Lamb, which it offsets on the northwest. Elevation is 4,474 feet. It marks the limits of the productive area in the Leo sand on the west side.

Continental Oil Co. is moving in material for its No. 3 Apex-3, NW NE NW section 34-36n-65w, a south offset to Minnelusa Oil Co. No. 1-A Lamb, the most northerly Leo sand producer in the field, and a southeast diagonal offset to Continental's No. 11-1-O Tom Bell.

Continental Oil Co. No. 3 Apex-3, NW NE NW sec. 34-36n-65w. M.I.M. (first report).
C. L. Price No. 2 Lamb, C SE SW sec. 12-35n-65w. Cmtd. 7-in. 4,815 ft.; top Dakota 4,830 ft.; W.O.C.
Minnelusa Oil Co. No. 2 H. & M., NW NE NE sec. 8-35n-65w. Drlg. 5,250 ft.; prep. to core.
H. D. Moore et al No. 1 Beregren, NW sec. 23-35n-63w. Drlg. in Sundance 937 ft.; top Morrison 587 ft.
Continental Oil Co. No. 4 Apex-2, NW NE SE sec. 34-36n-65w. Drlg. 5,323 ft.

Park County

Valentine & Watson No. 1 Johnson, NE NE NE sec. 6-57n-99w. T.D. 2,452 ft.; U.R. to lower 5⅞-in.
Resolute Oil Co. No. 2 State, C SW SW sec. 16-57n-101w. Drlg. 4,000 ft.
Paul Stock No. 1 Govt., SE SE NE sec. 20-53n-101w. T.D. 4,809 ft.; sat. at 4,793-4,809 ft.; swbd. 10 B.P.H. before acid.; 1,000 gals.
Continental Oil Co. No. 1 Northern Pacific, SE SE NW sec. 23-58n-98w. Loc. on Frannie dome (first report).

Sublette County

Texas Co. No. 3-H, NE NW NW section 27-27n-113w, LaBarge field, was completed at 1,004 feet for 15 bbls. in 22 hours on the pump.

Yellowstone Oil Co. No. 1, 200 ft. N of S line of the H. L. Budd ranch, SE SE sec. 31-31n-112w. Drlg. 100 ft.
Wyo. Pet. Corp. No. 1 Chas. Budd, C NE NE sec. 10-29n-113w. S.D. 250 ft.
Progressive Oil Co. No. 1 Haddenham, C NE SE sec. 21-28n-113w. Drlg. 832 ft.

Sweetwater County

Sinclair-Wyoming Oil Co. No. 33-A, SE SW SW sec. 11-26n-90w. T.D. 2,153 ft.; cmtd. 8¼-in. at 2,129 ft.; tstg.

Uinta County

Stove Creek Oil Co. No. 1 Govt., C SE NW sec. 26-14n-119w. Res. at 1,400 ft.

Washakie County

Wyoming O. & R. Co. No. 10-B Brome, C SE NE sec. 6-47n-90w. S.D. 1,632 ft.

Weston County

Gose Oil Synd. No. 1, NE NE NE sec. 28-47n-63w. C.O. after landing 4½-in. at 4,900 ft.
Osage Trust Co. No. 1, SE NW NE sec. 22-46n-64w. Set 500 ft. csg. through Lakota and res. to go to the Sundance.
Howland & Seneker, NE NW SW sec. 13-46n-64w. Rng. 8¼-in. through Greenhorn.
West Osage Oil Co. No. 3, SW SE NE sec. 15-46n-64w. W.O. csg.
Updike Bros. No. 6, CSL NE SW sec. 25-46n-64w. Cmtd. 8¼-in. through Greenhorn; W.O.C.
John Brorphy No. 1 George, SW SE NW sec. 26-48n-64w. T.D. 2,080 ft.; W.O. csg.

MONTANA

Crude production in Montana, as reported by the State Conservation Board, was 436,086 bbls. in May, a decrease of 21,469 bbls. compared with April. Storage at the end of the month was 1,725,671 bbls., an increase of 13,273 bbls.

Carbon County

R. C. Tarrant No. 1, 500 feet west of C section 3-6s-18e, a test on the Roscoe dome, drilled through a fault and was abandoned at 2,205 feet. Rig probably will be moved back and another hole drilled.

Henderson Prod. Co. No 1-H-11 Elk 11, SE SE NW sec. 35-9s-23e. T.D. 1,540 ft.; top second Frontier 1,803 ft.; will pull 10-in. and U.R. 12½-in. through Frontier for Dakota test.
R. C. Tarrant No. 2 Heare, NW SE NW sec. 14-6s-19e. S.D. 1,780 ft.; chg. to rotary.
Sha-Wa Pet. Co. No. 1 Govt., SW NW NE sec. 35-9s-23e. T.D. 3,124 ft.; big. 4 B.P.D. through perf. csg.
Miracle Oil Co. No. 2 Govt., CWL NE SE sec. 3-6s-23e. Drlg. 2,391 ft.

Dawson County

Frank C. Hughes No. 1 fee, NW NE SE sec. 5-14n-55w. Drlg. 1,095 ft.

Fallon County

Montana-Dakota Utilities Co. No. 35 Unit 7, C SW sec. 9-6n-60e. Drlg. 506 ft.

Fergus County

Baughman & Singley No. 1 Skaggs, C NW SW sec. 7-15n-20e. Drlg. 1,036 ft.

Glacier County

Two completions and one new operation were reported in Cut Bank, all three in the southern part of the field. Texas Co. No. 9 Unit 6, C NW NW section 9-32n-5w, swabbed 118 bbls. in seven hours from the Cut Bank sand at 3,033 feet, total depth. The 7-inch was cemented at 3,011 feet. A. B. Cobb No. 3 Reagan-Jackson, SW SE NW section 5-32n-5w, swabbed 35 bbls. first 24 hours from the Cut Bank at 2,740-75 feet. There was a show of oil in the Sundance at 2,717 feet.

Texas Co. No. 2 Curran, C NW NE sec. 8-32n-5w. Loc. (first report).
Glacier Prod. Co. No. 1 Thomas Unit, 1,980 ft. from S line, 2,640 ft. from W line, sec. 14-35n-5w. Drlg. 2,200 ft.
Glacier Prod. Co. No. 3 Bonnett, CSL NW SW sec. 4-32n-5w. T.D. 2,580 ft.; tstg.
Nadeau Bros. No. 5 Farmers State Bank, CEL SE NE sec. 17-33-5w. C.O. 2,730 ft.
Texas Co. No. 3 Hardwick, C NE NE sec. 17-32n-5w. Drlg. 500 ft.
Santa Rita O. & G. Co. No. 3 Ritchie, SE NW SW sec. 5-33n-5w. Drlg. 1,500 ft.; Colo. 432 ft.
A. E. Wilkinson No. 3 Allotted-111, C NW SW sec. 31-33n-5w. Drlg. 1,335 ft.

Park County

Ben W. Ryan et al No. 1 Burgess, SE SW NW sec. 28-2s-11e. Drlg. 1,550 ft.

Petroleum County

O. B. Canfield No. 2 Govt., SE NE NE sec. 21-17n-24e. Drlg. 779 ft.

Pondera County

Jones-Chambers No. 1 Erickson, SW SE SW sec. 3-27n-4w. Drlg. 1,300 ft.

Stillwater County

Indian Terr. Ill. Oil Co. No. 2 Hepp, NW NW NW sec. 25-1n-21e. Cg. 4,885 ft.

Teton County

Gulf State Oil-Zodiac Oil Co. No. 1 Coffee-Wallenstein, SW SW SW sec. 5-27n-5w. Drlg. 370 ft.

Toole County

One completion in Kevin-Sunburst, on the west side, was Henry Vander Pas No. 2 Ward, SE SW NW section 28-35n-3w, which is pumping 60 bbls. per day from the contact at 1,706-11 feet after acidizing with 500 gallons.

General Oils, Ltd., No. 1 State, SW SE SE sec. 36-35n-4w. Drlg. 225 ft.
Ramona Oil Co. No. 2 Govt., NW NE NW sec. 12-35n-3w. T.D. 1,543 ft.; rng. 6¼-in. (formerly Chab Oil)
A. E. Crumley & Son No. 13 Fryberger, CNL NW SE sec. 24-35n-3w. Drlg. 1,050 ft.
Big West Oil Co. No. 2 Engle, SE SW SW sec. 1-35n-3w. T.D. 1,602 ft.; sd. 1,573-1,602 ft.; shot 70 qts.; C.O.
G. H. Lund No. 1 Dahlen, C SE NW sec. 35-35n-4w. T.D. 2,057 ft.; tstg.
Montana Gas Corp. No. 2 Clark, C SE SW sec. 24-37n-1w. T.D. 2,430 ft. in Madison; drlg. up tbg.; wtr. sd. 2,400-21 ft.
Casper T. Olen No. 8 Engermoen, SW NE SW sec. 11-35n-2w. S.D. 1,630 ft.
V. F. Dahl No. 1 Kimball, SW SE SE sec. 1-35n-3w. T.D. 1,486 ft.; cmtd. 7-in.; W.O.C.
O. A. Nepstad No. 2 Haugen, NW NW NE sec. 11-35n-3w. Drlg. 1,150 ft.
Pfabe & Engleking No. 2 Hurley, NE NE NW sec. 8-34n-2w. Drlg. 350 ft.
H. C. Morton No. 8 Morton, C SW NW sec. 24-34-2w. S.D. 650 ft.
Chas. Grant et al No. 1 Anderson, SE NE NE sec. 26-35n-4w. S.D. 2,109 ft.
West Kevin Community Lease, Inc., No. 1 McClary, SW NE NW sec. 3-34n-4w. T.D. 2,160 ft.; pmpg. 160 B.W.P.D.; 6 to 7 bbls. oil.

Yellowstone County

Broadview Dome Oil Co. No. 1 Stallinberger, NE NE SW sec. 18-3n-23e. S.D. 4,565 ft.; to resume.
Riverton Oil Co. No. 1 Fox, CEL NW NE sec. 14-2n-23e. Drlg. 1,814 ft.

UTAH

Grand County

Cane Creek Oil Co. No. 1 Govt., NW SW sec. 31-26n-21e. T.D. 1,600 ft.; rng. 10-in. to 1,397 ft.
Crescent Eagle Oil Co. No. 1 Brendel, SW SE sec. 4-22s-19e. Drlg. 3,948 ft.

Summit County

Mountain Fuel Supply Co. No. 1 Wilde, NE SE SE sec. 9-2n-5e. Drlg. 1,729 ft.
Longwell Pet. Co. No. 1, SE SW SE sec. 35-3n-5e. T.D. 2,876 ft.; fsg.; H.F.W.

NEBRASKA

Keith County

Twentieth Century Oil Co. No. 1 Stuken, C NW NW sec. 21-14n-37w. Drlg. sh. 1,200 ft.

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Scotts Bluff County

Houston Pet. Co. No. 1 Judd, NE NE NE sec. 15-22n-57w. Bldg. drk. (first report).

Sioux County

Felmont Oil Corp. No. 1, C SW NE sec. 21-27n-55w. R.U.R.
Union Oil Co. of Calif. No. 1 Agate-15, NW SE SE sec. 15-28-55w. Cg. 6,710 ft.

NORTH DAKOTA

Williams County

California Co. No. 1 Kamp, C NW NE sec. 3-154n-96w. Drlg. 8,853 ft.

La.-Ark. Fields

(Continued from Page 65)

south, operators were working to install master gate valves on W. L. McClanahan No. 1 Frost Lumber Co., C NE SW section 22-9-13. The well blew out at total depth of 4,656 feet, blowing a short time before bridging. It is reported to have made gas with some show of oil.

In the Sligo field, Union Producing Co. completed No. 3-C Skannel, NE cor. section 13-17-12, for 30 bbls. per hour on a half-inch choke with tubing pressure of 140 pounds, casing pressure of 100 pounds and total depth at 3,110 feet. Perforations were made at 3,094-3,104 feet.

Texas Border Operations

Two Shelby County tests in the eastern border section of Texas held interest. Mallard & Locke No. 1 W. E. Roller Estate, Jesse Sullins Survey, 2¼ miles northwest of Tenaha, reported a showing of gas at 5,330-36 feet and 5,339-45 feet. It is drilling.

W. A. Reddit No. 2 Pickering Lumber Co., P. J. Loggins Survey, bottomed at 4,220 feet, will make a test of the Woodbine sand encountered at 2,880-2,960 feet. The test is directed to the Glen Rose formation.

Southwest of the Jefferson field in Marion County, Arkansas Louisiana Gas Co. No. 1 Johnson, Johnson Survey, topped the red beds at 3,865 feet this week, showing it to be about 111 feet lower than the company's No. 1 Pitts, which brought in the first Hill sand gas production in the section several weeks ago.

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Arkansas Drilling

Routine drilling continued in Arkansas, with the Schuler field due several new wells, as tests topped the Jones sand and Big lime in the major field.

The Buckner, Magnolia and Village fields, recently opened in Columbia and Lafayette counties, are expected to be given an outlet in time, as development progresses. Standard Oil Co. of Louisiana announced price schedules for the crude production of the three areas. The gravity scale quotes $1.15 for crude of 40 gravity and above, grading down to 83 cents for crude below 25 gravity with a 2-cent differential for each gravity interval between. This price schedule is 7 cents lower than that covering the general classification of North Louisiana and South Arkansas crudes, the production in the three fields being to some degree inferior to that from other fields in the area.

Estimated Production

Estimated daily gross production all companies week ending July 8:

NORTH LOUISIANA

	Barrels
Bellevue	640
Caddo light	4,050
Caddo heavy	2,550
Converse	600
Cotton Valley heavy	85
Cotton Valley light	*10,570
De Soto and Red River	1,410
Elm Grove	365
Haynesville	3,075
Holly	80
Homer	2,635
Lisbon	10,515
Pleasant Hill	100
Rodessa	35,445
Safepta-Carterville	†525
Sligo	1,250
Sugar Creek	265
Urania	2,885
Zwolle	2,200

ARKANSAS

Total	79,245
Buckner	970
Champagnolle	1,085
El Dorado	1,840
Lisbon	270
Miller County	395
Nevada	650
Rodessa	6,740
Schuler	14,130
Smackover light	2,060
Smackover heavy	16,150
Stephens	550
Troy	1,200
Urbana	1,175
Village	160
Total	47,375

Texas side of Rodessa field 31,305 bbls. daily.

*4,200 bbls. is distillate.
†245 bbls. is distillate.

N. Y.-Penna. Gas Fields

COUDERSPORT, Pa., July 11.—The New York State Natural Gas Co. test on the J. D. Morley farm in Bingham Township, Potter County, which drilled through the Oriskany at 5,279-5,302 feet without finding any production last week was completed as a dry hole at 5,325 feet during the past week. It was the lone completion of the week in the New York-Pennsylvania Oriskany sand gas fields.

G. L. Cabot, Inc., ran into a fishing job in the test on the West Bingham Grange farm, Bingham Township, Potter County, at 3,575 feet and is drilling at 2,300 feet on the Whitney-Duke farm, also in this township.

The Cunningham Natural Gas Co. was reported drilling at an estimated depth of 4,250 feet on the Thomas Hart estate farm, Oswayo Township, in its search for a southern extension to the State Line area. These are the only active operations in Potter County.

New York State Natural Gas Co. is drilling at 4,830 feet on the L. Dickerson farm, Gaines Township, Tioga County. G. L. Cabot, Inc., is moving in material for a test on the Flora Bell Joy farm, Brookfield Township, Tioga County.

Updegraph has resumed drilling in his wildcat on the O. E. Erickson farm, Elk Township, Warren County, and is down to 5,154 feet with the Medina as his objective. McKenry and others are still fishing for tools at 4,718 feet on the Stellman farm, Rockland Township, Venango County.

Several interesting developments occurred in the New York operations during the past week. G. L. Cabot, Inc., encountered a show of gas at 580 feet on the Gibson farm, Woodhull Township, Steuben County, It was not in commercial quantities, however, the well is being drilled on to the Oriskany.

In other Woodhull operations this company is drilling at 2,626 feet on the Coral Cook farm and Hanley

(Continued on Page 92)

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THE OIL AND GAS JOURNAL

West, Central and Panhandle Texas

By MITCHELL TUCKER

Discover Deep Pay Horizon in the Noodle Creek Field

FORT WORTH, Tex., July 11.—Small field extensions and wildcat test development in West Texas and the discovery of a new deep pay horizon for the Noodle Creek field of Jones County in West Central Texas marked another rather quiet week in the district.

North Basin Area

The new Roberts pool of southwestern Yoakum County received its second producer last week when Shell Petroleum Corp. No. 2 Roberts, one-quarter mile north of the discovery, was officially gauged at 362 bbls. with total depth at 5,090 feet. One-fourth of a mile north, Shell is digging pits for No. 3 Roberts. This new area is about 4 miles north of the Denver pool.

Shell Petroleum Corp. No. 2 Dowden, southwest extension to the Denver area, flowed 139 bbls. in 22 hours after two-stage acid treatment at a total depth of 5,065 feet.

A wildcat in central Cochran County, southeast of the town of Lehman, was staked by Texas Co. last week, No. 1 D. S. Wright, in the Potter County School lands, contracted to 5,500 feet.

Central Basin Area

Southern Andrews County's new pool opener, R. R. Rhodes and Tompkins No. 1 E. Cowden, flowed 1,060 bbls. in 24 hours after two-stage acid treatment. Bottomed at 4,220 feet, it was treated with 1,500 gallons, flowing 95 bbls. in 12 hours, and re-treated for the better flow. Sinclair Prairie Oil Co. will drill an east offset, No. 3 Cowden, section 1, Block 44, T.&P. Survey. This new area is about 4 miles north of the small Emma pool in the southern part of the county.

Interest in Gaines County centered on two wildcats in the northeastern corner of the county. J. T. Perryman, Jr., No. 1 Doak, section 43, Block H, D.&W. Survey, reported its first saturation last week from 4,990-5,001 feet and casing has been set at 4,700 feet for a test. Warr & Riddle No. 1 Brown, section 26, Block G, C.&M. Survey, wildcat about 7 miles southeast of the town of Seagraves was reported last week to have topped the solid lime 7 feet higher structurally than the Perryman test, which is about 8 miles southeast. The test is drilling below 4,770 feet.

South Basin Area

In the Sand Hills Ordovician area of central Crane County, Gulf Oil Corp. No. 8 Waddell, quarter mile north outpost, cored from 6,083 to 6,091 feet and recovered 3½ feet of saturated lime. Swabbing was begun and the outpost was last reported making about 11 bbls. of oil and 94 bbls. of water in six hours through casing.

Casteel, Ranger & Mixon No. 1 Hendricks, wildcat in southeastern Ector County, after fishing for tools at 4,300 feet for several days, is reported to have recovered them and preparing to test several sections above 4,300 feet.

Kimble County

Plateau Oil Co. No. 1 Anderson, Kimble County wildcat 7 miles northwest of Junction, was reported pumping 60 bbls. of fluid daily, half oil of 28.5 gravity and half water. Oil and water were struck in the Ellenburger, topped at 1,180 feet, total depth 1,868 feet. The company is drilling water well preparatory to starting another test, which will be close to its No. 1 Anderson.

Pecos County

Magnolia Petroleum Co. No. 1 Tex-Mex-McKee, northern Pecos County wildcat, which struck sulfur water in the Ellenburger from 6,230-35 feet, plugged back to 6,180 feet last week. It will attempt to develop production from the upper sections of the Ellenburger and from the Simpson from which it headed oil last February while drilling.

WEST CENTRAL TEXAS

Opening a third producing horizon in Jones County was definitely assured last week when Humble Oil & Refining Co. No. 1 Riley Horton, deep horizon discovery in the 14-year-old Noodle Creek pool, flowed 23 bbls. hourly through tubing. Saturation was encountered from 2,929-32 feet, total depth. The well is 1¼ miles east of the Noodle Creek field and a southwest offset to Humble No. 1 Irwin which opened the Fisher County pay in that field.

The Pardue field of southern Haskell County received three new tests last week when J. W. McMillen awarded contracts to H. O. Grace. The first well will be a quarter mile south of the discovery, while the other two will be in the J. F. Morgan Survey No. 59. The west offset to the second producer in this pool, Forest Development Corp. No. 1 Bankers Life Insurance Co., cored past 2,904 feet, 100 feet below the expected top of the producing Adams Branch lime, without finding the marker. The well may be carried to the Palo Pinto lime, Avoca pool pay.

In Young County, Union Producing Co. opened a new Caddo lime oil pool approximately 5 miles southeast of Graham. Its No. 1 Ramsey-Corley has been estimated at about 1,000 bbls. per day through open tubing and casing, with equalized pressure of 1,550 pounds, total depth is 3,777 feet. Another pool in the county opened a few weeks ago by Cosden Petroleum Co. has been officially gauged at 404 bbls. per day through half-inch tubing with gas-oil ratio of about 2,000 to 1. This well is about 5 miles south of Graham and is producing from the Caddo lime, the pay found in the James pool of that county.

Developments in another of Young County's recently opened pools was seen last week when Homestead Oil Co. staked four locations in the area opened by them several weeks ago. The wells are to be begun in the next week.

Official gauge on the new Callahan County gas well in the Oplin Ordovician pool in the southwestern part of the county, Petroleum Drilling Co. No. 1 Cook & Jordan, was 40,900,000 feet. Production is from 8 feet of Ellenburger lime from 4,409-17 feet. The well is 1,508 feet south of Hughes and others No. 1 Poindexter, discovery well.

In Brown County, W. D. Cunningham No. 1 Horton, W. K. Dalton Survey, 8 miles northeast of Brownwood, flowed an estimated 335 bbls. of oil during a 36-hour gauge. Production is from 16 feet of Ranger lime from 1,800 to 1,816 feet.

WEST CENTRAL TEXAS COMPLETIONS
(24-hour tests)

Brown County

Buckler No. 1 Jacobs, dry and abandoned at 1,583 feet. Delmarva Oil Corp. No. 1 Thompson, dry and abandoned at 1,065 feet. Hightower Oil & Refining Co. No. 4 Mullins, 1,203-20 feet, 87 bbls. Selvidge and others No. 3 Perry, 1,228-48 feet, 60 bbls.

Callahan County

Gallagher and others No. 1 Harris, dry and abandoned at 1,445 feet. McDonald & Campbell No. 1 Crisman, dry and abandoned at 893 feet. Stine and others No. 1 Kniffen, dry and abandoned at 1,830 feet. Webb & McCabe and others No. 1 Dawkins, dry and abandoned at 4,115 feet.

Jones County

Condor Petroleum Co. No. 17 Sayles, 1,955-60 feet, 461 bbls. Fain-McGaha Oil Corp. and Gregg Oil Corp. No. 4 Daugherty, 1,943-45 feet, 314 bbls. Fain-McGaha Oil Corp. and Gregg Oil Corp. No. 3 Lyckman, dry and abandoned at 3,262 feet. Humble Oil & Refining Co. No. 4 Holluns, abandoned location; No. 5 Holluns, abandoned location. Martin and others No. 1 Herndon, dry and abandoned at 4,101 feet. Oil States Exploration Co. No. 1 Sellers, dry and abandoned at 2,260 feet. Petroleum Production Co. No. 6 Milsap, 1,925-47 feet, 284 bbls. Terry and others No. 1 Barton, 1,590-1,603 feet, 35 bbls.

Coleman County

Levine and others No. 1 Masterson, dry and abandoned at 2,633 feet.

Eastland County

Lone Star No. 1 Parmer, 3,975 feet, 77 bbls. Phillips Petroleum Co. No. 1 Snoody, abandoned, crooked hole, 1,620 feet.

Fisher County

General Crude No. 1 Casey, 3,552-64 feet, 442 bbls.

Palo Pinto County

Hughes and others No. 1 Bailey, dry and abandoned at 975 feet.

Shackelford County

Baker No. 1-19 M. Davis, 1,621-29 feet, 15 bbls. Charter Oil & Gas Co. No. 14 Mims, 1,603-11 feet, 12 bbls. Evans No. 1 Hill, dry and abandoned at 716 feet. Evans & Christie No. 1 Lee, 938-78 feet, 3 bbls. Forest Development Co. No. 1 Hendricks, dry and abandoned at 5,056 feet. S. B. Owens No. 8 Morris, 1,593-1,613 feet, 180 bbls.; No. 9 Morris, 1,594-1,612 feet, 150 bbls.; No. 10 Morris, 1,601-13 feet, 190 bbls.; No. 11 Morris, 1,597-1,608 feet, 89 bbls.; No. 12 Morris, 1,583-96 feet, 85 bbls.; No. 13 Morris, 1,570-86 feet, 85 bbls.; No. 14 Morris, 1,587-1,607 feet, 10 bbls. T. K. Simmons No. 12 Harvey, 1,636-54 feet, 30 bbls.; No. 13 Harvey, 1,623-40 feet, 128 bbls.; No. 14 Harvey, dry and abandoned at 1,640 feet.; No. 15 Harvey, dry and abandoned at 1,711 feet.; No. 11-B Harvey, dry and abandoned at 1,748 feet. Tannehill Oil Co. and others No. 42 Newell, dry and abandoned at 1,278 feet. Ungreen & Frazier No. 1-A Harvey, dry and abandoned at 2,022 feet.

WEST TEXAS FIELD COMPLETIONS
(24-hour gauges)

Ector County

Atlantic Refining Co. No. 1-C University, 3,350-3,650 feet, 1,370 bbls. Barnsdall No. 19 H. Foster, 4,100-4,220 feet, 839 bbls. Broderick & Calvert No. 3 T. & P. lands, 4,035-4,161 feet, 2,988 bbls. Gulf Oil Corp. No. 108 Goldsmith, 4,100-4,200 feet, 840 bbls. Gulf Oil Corp. No. 111 Goldsmith, 4,115-4,202 feet, 2,336 bbls. T. & P. Coal and Oil Co. No. 5 H. Foster, 4,000-4,155 feet, 1,267 bbls. L. H. Wentz No. 10-D Parker, 4,040-4,178 feet, 1,824 bbls.

Gaines County

Continental Oil Co. No. 2-45 W. M. Moore, 4,894-4,980 feet, 1,071 bbls.; No. 1-49 Wasson, 4,880-4,980 feet, 1,071 bbls.

Pecos County

E. M. Thomasson Production No. 1 Eaton, dry and abandoned at 1,820 feet.

Howard County

Eastland Oil No. 1-B T. & P. Lands, 2,687-2,814 feet, 940 bbls. Illinois Oil No. 8 Lane, 2,444-2,818 feet, 735 bbls. Lockhart Oil No. 2 Heusinger, 2,680-

2,860 feet, 145 bbls. Moore Bros. No. 4-A Snyder, 2,627-2,850 feet, 1,088 bbls.

Sterling County

Loffland Bros. and Moore Bros. No. 2 Parramore, abandoned at 1,904 feet.

Upton County

British American No. 12 Robbins, 2,291-2,325 feet, 227 bbls. T. & P. Coal and Oil Co. No. 10-E Lane, 2,225-77 feet, 429 bbls.

Ward County

Gulf Oil Corp. No. 96 Estes, 2,510-2,660 feet, 1,723 bbls.; No. 101 Hutchins, 2,560-3,080 feet, 104 bbls.; No. 108 Hutchins, 2,610-2,750 feet, 1,136 bbls. T. & P. Coal and Oil Co. No. 25 James, 2,221-2,421 feet, 447 bbls. Brashera & Sons No. 2 fee, 3,057-3,222 feet, 60 bbls.

Winkler County

Emperor Oil No. 2-C S. M. Halley, 2,741-2,880 feet, 1,027 bbls. Emperor & Iverson No. 3 Thompson-Cowden, 2,719-2,868 feet, 1,050 bbls. Sinclair Prairie No. 9-B Vaden, 2,970-3,049 feet, 526 bbls. W. K. Royalty No. 3-C Walton, 3,036-60 feet, 340 bbls.

Yoakum County

Denver Production & Refining Co. No. 10 Whittenburg, 4,770-5,075 feet, 906 bbls. Shell Petroleum Corp. No. 1 Lowe, 4,900-5,024 feet, 706 bbls. Ohio Oil Co. No. 1 Coffield, 5,005-65 feet, 200 bbls. Texas Co. No. 1 A. B. Smart, 4,846-5,022 feet, 734 bbls.

East Texas Fields

(Continued from Page 66)

at 440 feet. J. O. Griffiths No. 1 R. C. Hayner, dry and abandoned at 3,502 feet. Topez Oil No. 1 M. Mizell, dry and abandoned at 2,674 feet.

Freestone County

In the Cayuga field, Amerada Oil Corp. No. 4 H. Beck, 4,004-27 feet, 204 bbls.

Lamar County

Dahl & Barr No. 1 Lewis-McQueston, dry and abandoned at 1,253 feet.

EAST TEXAS FIELD COMPLETIONS

(One-hour tests)

Gregg County—Longview Area

Atlantic Refining Co. No. 4 J. R. Fenton, 3,581-3,642 feet, 98 bbls. General American No. 25 G. E. Adams, 3,584-94 feet, 60 bbls.; No. 26 G. E. Adams, 3,607-3,619 feet, 60 bbls. Roger Lacey No. 1 R. R. Collum, 3,638-45 feet, 50 bbls. Stanolind Oil & Gas Co. No. 18 J. W. Aiken, 3,535-3,635 feet, 43 bbls.; No. 20 G. Fenton, 3,570-3,618 feet, 48 bbls. Texas Co. No. 17 E. M. Woods, 3,565-69 feet, 40 bbls.

Gregg County—Kilgore Area

M. T. Flanagan No. 5 W. B. Walker, 3,536-72 feet, 54 bbls. Gulf Oil Corp. No. 5 G. W. Langley, 3,628-36 feet, 65 bbls. Jess Bod Oil Co. No. 5 R. H. Still, 3,520-27 feet, 10 bbls. Magnolia Petroleum Co. No. 40 J. Radford, 3,620-21 feet, 68 bbls. Shell Petroleum Corp. No. 20-A M. H. Bivins, 3,568-3,664 feet, 60 bbls.; No. 44 W. W. Elder, 3,575-3,632 feet, 60 bbls. Sinclair Prairie No. 62-A A. A. King, 3,468-3,588 feet, 40 bbls. Tide Water No. 16 W. D. Lacey, 3,545-48 feet, 30 bbls.

Rusk County—Kilgore Area

Atlantic Refining Co. No. 5 L. Morse, abandoned at 3,100 feet. Francis Oil Co. No. 7 J. H. Scoggins, 3,643-45 feet, 31 bbls. Magnolia Petroleum Co. No. 18 N. Bean, 3,528-61 feet, 10 bbls.; No. 7 H. P. Lecerett, 3,676-3,720 feet, 40 bbls. J. Schulman No. 1 W. H. Smith, 3,712-14 feet, 15 bbls. Shell Petroleum Corp. No. 1, 3,682-3,703 feet, 20 bbls.

Upshur County—Longview Area

O. L. Hickman Estate No. 5 H. W. Moyer, 3,576-84 feet, 30 bbls. Southland and United E. & W. No. 46-A Eva O'Bryne, 3,670-71 feet, 10 bbls.

Lester-Duffield No. 10 L. Graves, abandoned location. Magnolia Petroleum Co. No. 34 J. W. Free, 3,633-53 feet, 80 bbls.

Rusk County—Joiner Area

British American No. 9 Mayfield, 3,619-24 feet, 40 bbls. Gulf Oil Corp. No. 12-A W. P. Keeley, 3,770-86 feet, 45 bbls. Humble Oil & Refining Co. No. 13 S. Dennis, 3,749-59 feet, 60 bbls. Lyde & Tayloe No. 11 C. Young, 3,648-3,762 feet, 90 bbls. Gordon McMillian No. 8 M. A. Thrash, 3,730-72 feet, 70 bbls. Ohio Oil Co. No. 18 J. F. Mason, 3,654-3,715 feet, 48 bbls. Tide Water No. 30-B L. J. Pinkston, 3,786-3,806 feet, 60 bbls.

Gulf Coast Fields

(Continued from Page 69)

casing 6,838-43½ feet, 652 bbls., quarter-inch choke; E. L. Smith and Ownby Drilling Co. No. 2 L. M. Meyers, perforated casing 6,847-51 feet, 492 bbls., quarter-inch choke; Windsor Oil Co. No. 2 H. E. Ley, perforated casing 6,836-40 feet, 695 bbls., quarter-inch choke. Friendswood field: Humble Oil & Refining Co. No. 14 L. S. Beamer, sand 5,764-6,045 feet, 615 bbls., quarter-inch choke; Humble Oil & Refining Co. No. 1 Houston Development Co., 8,452 feet, abandoned. Pierce Junction field: Hamill and Smith No. 5 Parsons, 4,435 feet, 410 bbls., quarter-inch choke. Tomball field: Mike Koury No. 1 H. M. Bell, perforated casing 5,584-90 feet, 9,700,000 feet of gas.

Jefferson County

Amelia field: Humble Oil & Refining Co. No. 9 Peveto, 6,774 feet, 620 bbls., quarter-inch choke; Texas Co. No. 3 Pansy Yount, 5,868 feet, 563 bbls., quarter-inch choke.

Liberty County

Hankamer field: Hankamer Oil Co. No. 1 Stengier, 4,595 feet, abandoned. Hardin field: Amerada Petroleum Corp. No. 1 J. H. Cessna, perforated casing 7,635-45 feet, 480 bbls., quarter-inch choke; Gulf Oil Corp. No. 3 J. H. Cessna, perforated casing 7,573-83 feet, 516 bbls., quarter-inch choke; Glenn H. McCarthy No. 1 Oliver, perforated casing 7,630-48 feet, 164 bbls., 9/64-inch choke; Woodley Petroleum Co. No. 1 Susan Wright, perforated casing 7,609-12 feet, 474 bbls., quarter-inch

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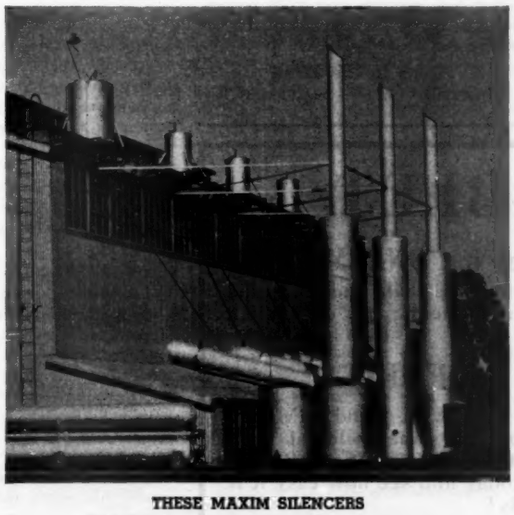

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choke; Woodley Petroleum Co. No. 1 Chambers, perforated casing 7,621-24½ feet, 578 bbls., quarter-inch choke.

Matagorda County

Bay City field: Hamman Exploration Co. No. 2 G. M. Sloan, perforated casing 9,200-32 feet, 184 bbls., various chokes.

Polk County

Segno field: Humble Oil & Refining Co. No. 1 Carter Brothers, perforated casing 5,194-96 feet, 289 bbls., quarter-inch choke.

Washington County

Brenham dome: Freeport Sulphur Co. No. 1 Sundenhusen, 2,471 feet, abandoned.

Wharton County

Withers field: Ferguson and Taylor No. 2 Thompson, 5,548 feet, 360 bbls., three-sixteenths inch choke; Texas Co. No. 20-B Pierce Estate, perforated casing 5,541-43 feet, 120 bbls., one-eighth inch choke; Smith and McDannald No. 1 National Bank of Topeka, 5,555 feet, abandoned.

California Field

(Continued from Page 82)

will be retarded until the perforations have been effectively plugged up.

General Petroleum Corp. has not had much luck with its No. 1 St. Helens in section 12-28-20, as this wildcat between north and south Belridge fields is good for only about 10 bbls. of oil and water per day from 1,400 feet. It was carried to 8,683 feet in search of deep production but failing was plugged back to test shallow showings logged during the course of work. In the Midway-Sunset field of Kern County, Midway Peerless Oil Co. has completed No. 16 in section 15-31-22, pumping 55 bbls. of 14.1-gravity oil from 1,210 feet. The hole was finished with 354 feet of 6⅝-inch liner including 335 feet of perforated landed at 1,203 feet and 940 feet of 3-inch tubing. In the Rio Vista gas field, Texas Co. has completed an outpost about 2 miles east of production flowing at the rate of 24,400,000 feet of dry gas per day. This outpost is No. 1 Midland fee in section 4-3-3.

N. Y.-Penna. Gas Fields

(Continued from Page 89)

& Bird have cemented in the casing preparatory to drilling in on the M. E. Woodward farm. Depth of this hole is 3,705 feet.

John Becker found a show of gas gauging 150,000 feet at 4,911 feet on the Riley Brothers farm in Willing Township, Allegany County, but the gas was accompanied by salt water. This operation is now shut down awaiting developments.

Van Gelder and others are drilling at 1,166 feet on the J. O'Hara farm in Willing Township and Empire Producing Co. is spudding in on the Floyd Wilson farm, this township.

Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, July 9.—With nine new west flank crude producers completed in June, adding 11,687 bbls. potential, the aggregate potential for Turner Valley is now estimated around 48,687 bbls. a day. July completions are expected to bring the total over 50,000 bbls., or close to 50 per cent of Canada's crude requirements. Four new wells started in June, and six are expected to start in July.

The largest June completion was Vulcan-Brown Petroleums No. 1, LSD 10, section 5-19-2w5, with 4,528 bbls. open flow and 3,018 bbls. rated potential. Sundance Royalties No. 1, LSD 9, section 17-18-2w5, had 3,858 bbls. open flow and 2,572 bbls. potential. Frontier Royalties No. 1, LSD 11, section 16-18-2w5, finished at 6,915 feet showed temporary potential of 2,462 before acidizing. Model-Spooner-Reward No. 1, S half LSD 1, section 29-18-2w5, finished at 7,185 feet with 1,213 bbls. potential after acidizing. Barsac Royalties No. 1, LSD 12, section 21-18-2w5, has 232 bbls. potential. National Petroleum Corp. No. 2, LSD 14, section 9-18-2w5 has an estimated flow of 400 bbls. a day after acidizing.

In section 20-18-2w5, United-Brown Petroleums No. 5, LSD 1, finished at 7,303 feet with temporary potential set at 789 bbls. is starting 11-day test for permanent potential.

In section 29-18-2w5, Globe Royalties No. 1, LSD 7, finished at 7,403 feet, has lifted tubing to 6,998 feet and treated the upper horizon with 5,000 gallons of acid, started with flush production of 173 bbls. in seven hours and is expected to settled to 500 bbls. a day. It will likely be given a second acid treatment in the lower lime.

In section 32-18-2w5, Royalite Oil Co. No. 30, LSD 11, finished at 7,690 feet with 501 bbls. estimated natural flow, developed flush production of 2,227 bbls. a day on 24-hour open flow test, with potential rated at 1,518 bbls. The well, which is the farthest down the west flank, has bottom-hole pressure over 2,500 pounds, the greatest in the field, with 3,100,000 feet of gas.

Tests in the Lime

In section 5-19-2w5, West Central Turner Valley, Mercury Royalties No. 1, LSD 8, got the Madison limestone at 6,114 feet and cemented 10 feet in. It is deepening below 6,188 feet, using oil to drill through the lime.

In section 32-18-2w5, West Turner Petroleums No. 2, LSD 7, cemented casing at 6,703 feet, after getting the limestone.

In section 29-18-2w5, Davies Petroleums No. 1, LSD 2, bottoming at 7,375 feet after getting the Madison at 6,898 feet, is pulling tubing and cleaning out with cable tools. Production, originally estimated between 1,000 and 1,500 bbls. a day, has been shut off by cavings in the lime.

In section 17-18-2w5, Coronation Royalties No. 1, LSD 15, finished at 7,572 feet, some 470 feet in the lime. Tubing was run and the hole cleared. Temporary potential was set at 582 bbls. a day. It will be acidized and official government test made.

Model Oils No. 1 producer, LSD 8, section 22-20-3w5, finished originally in the upper lime at 5,905 feet, may be deepened as a result of the large production recently secured in the nearby Royalite Oil Co. No. 29 Turner Basin, LSD 7, section 27-20-3w5. Model No. 1, starting as a small naphtha producer, developed a steady crude production around 140 bbls. a day, it being the first Turner Valley well to show crude production in the Madison, some six years before Turner Valley Royalties No. 1 was drilled. The Model well was carried only 105 feet into the lime, so that it did not reach the main porous horizon, about 350 feet farther in.

New Tests Planned

In section 17-18-2w5, Southwest Turner Valley, Anglo-Canadian Oil Co. No. 3, LSD 10, has derrick up, and is expected to spud this month. It offsets Sundance Royalties No. 1 large producer to the west.

In section 29-18-2w5, Granville Oils, Ltd., of Vancouver, British Columbia, whose No. 1 well some time ago got production in LSD 16, has secured permit for No. 2.

In section 21-18-2w5, Lease Holdings, Ltd., will drill its No. 1 test on SW cor. LSD 2. The acreage, subleased from Highwood Sarcee Oils, Ltd., is west of Highwood-Sarcee No. 2 naphtha producer and east of West Side Royalties No. 1 crude producer, and nearby wells have indicated strong gas pressure. The company is financed by European capital and is headed by P. J. Hatterman Van Oudenol. Preliminary work will commence this month and rotary equipment will be used.

D. & D. Oil Co. No. 1, LSD 12, section 9-18-2w5, has financing arranged and will start rigging within a few weeks. Location is west and a little south of National Petroleum Corp. No. 2, and is believed to be west of the eastern fault which interfered with production in the National Petroleum well.

New Western Test

A new far-western test for Turner Valley will be located in section 13-19-3w5, by Southfield Syndicate, which holds a full quarter section. Location is 3 miles west and 1 mile north of Vulcan-Brown Petroleums No. 1 producer, and Southfield No. 1 will test a new potential area considerably north and west of the main proven field. It is about 4 miles due south of the old Central Turner Valley area. The only previous test in Township 19-3w5 was Dome Oils No. 1, LSD 16, section 36, about 3 miles due north, which got the cardium at 2,140 feet and the Blairmore at 3,660 feet but discontinued at 4,595 feet without reaching the Madison.

Willow Creek Test

A new far south test is Willow Creek No. 1, LSD 8, section 19-15-2w5, sponsored by the East Crest Oil Co. and drilling around 200 feet. Location is in the old Willow Creek field, almost due south of Turner Valley, and representing a potential southerly extension of the Turner Valley structure. Earlier tests in this area got light crude showings but were not carried to the Madison limestone.

Conservation Board Functions

Following the final passing by the Dominion parliament of enabling legislation, the new Alberta Gas Conservation Board began its work July 1. The board consists of W. F. Knode, chairman, C. W. Dingman, former director of the Petroleum and Natural Gas Division of the Alberta Lands and Mines Department, and T. G. Cottle, accountant. A first step will be a complete survey of crude potentials, while information secured through the recently completed flow and pressure tests of the gas-naphtha wells is already available. It is understood they show a marked decline in rock pressure.

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CONTROL OF FLOW THRU FORMATION
REGISTERED PROFESSIONAL ENGINEERS

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well, location and county—	S.T.R.	Depth	Status
Wilshire Oil, No. 1 Gaviota, Santa Barbara	35- 5-33	4,650	well P. B.
Montgomery, H. S., No. 1 Wagner, Capitan, S. Barb.	tideland	1,302	well P. B.
South Crude Oil, No. 2-191, Coal Oil Pt., S. Barbara	tideland	5,510	redrlg. 3,896
Carpinteria Oil, No. 1 Carpinteria, Santa Barbara	32- 4-25	2,440	sd. sh. drlg.
Hancock-Bush, No. 4 Hopkins, Santa Maria, S. Barb.	30-10-33	4,278	sd. sh. drlg.
Moore, E. H., No. 10 Sugar, Santa Maria, S. Barbara	19-10-34	4,996	sd. sh. drlg.
Union Oil, No. 2 Wheat, Santa Maria, Santa Barbara	22-10-34	3,945	pump 25 b.d.
Union Oil, No. 3 Vicente, Santa Maria, Santa Barbara	21-10-34	5,058	sd. sh. drlg.
Union Oil, No. 5 Vicente, Santa Maria, Santa Barbara	25-10-34	2,996	sd. sh. drlg.
Sunshine Oil, No. 1 Girard, Santa Maria, S. Barbara	27-10-34	3,798	sd. sh. drlg.
Standard Oil, No. 1 Cat Canyon, Santa Barbara	27- 9-33	5,541	sd. sh. drlg.
O'Donnell, J. E., No. 1 Helen, Lompoc, Santa Barbara	8- 7-33	3,581	idle
Douglas Oil, No. 1 Stratton, Los Alamos, S. Barbara	8- 8-33	6,011	sd. sh. drlg.
Barnsdall Oil, No. 3 Tognazzini, Gato Ridge, S. Barb.	9- 8-32	3,180	br. sh. drlg.
United West. Oil, No. 1, Los Olivos, Santa Barbara	16- 7-30	3,270	idle
High Mesa Oil, No. 1 Butcher, Ojai, Ventura	16- 4-22	1,691	hd. sh. drlg.
Holly Dev., No. Macrate, Ojai, Ventura	27- 4-23	1,498	sd. sh. drlg.
Texas Co., No. 5 Yale, South Mountain, Ventura	13- 3-21	5,970	gr. sd. drlg.
Merchants Pet., No. 1 Sespe, Ventura	1- 4-20	660	hd. sd. drlg.
St. Louis Oil, No. 1 Williamson, Sespe, Ventura	1- 4-20	510	cleaning out
Stalling & Senter, No. 1, Timber Canyon, Ventura	24- 4-21	1,360	sd. sh. drlg.
Section 20 Oil, No. 1, Sespe, Ventura	20- 5-19	1,625	sd. sh. drlg.
Darby Oil, No. 1 Cohn, Moor Park, Ventura	7- 2-19	3,246	sd. sh. drlg.
C. C. M. Oil, No. 7 Oakgrove, Padre Canyon, Ventura	23- 3-24	2,399	sd. sh. drlg.
Richfield Oil, No. 8-F Hobson, Rincon, Ventura	8- 3-24	3,150	O. S. drlg.
Tide Water A., No. 19 V.LW., Ventura Ave., Ventura	26- 3-23	9,906	O. S. drlg.
Tide Water A., No. 39 V.L.W., Ventura Ave., Ventura	24- 3-23	3,792	sd. sh. drlg.
Tide Water A., No. 111 Lloyd, Ventura Ave., Ventura	27- 3-23	9,070	hd. sd. drlg.
Tide Water A., No. 127 Lloyd, Ventura Ave., Ventura	27- 3-23	6,087	sd. sh. drlg.
Tide Water A., No. 7 Hartman, Ventura Ave., Ventura	22- 3-23	5,897	sd. sh. drlg.
Tide Water A., No. 11 McGonigle, Vent. Ave., Ventura	23- 3-23	7,015	hd. sd. drlg.
Shell Oil, No. 96 Taylor, Ventura Ave., Ventura	28- 3-23	6,760	sd. sh. drlg.
Shell Oil, No. 31 Edison, Ventura Avenue, Ventura	20- 3-23	7,798	recmtd. 7,710
Shell Oil, No. 37 Gosnell, Ventura Ave., Ventura	28- 3-23	8,618	P. B. 8,470
General Pet., No. 18 Barnard, Ventura Ave., Ventura	21- 3-23	7,182	sd. sh. drlg.
Amerada Pet., No. 5 Beer, Devils Den, Kern	22-26-19	8,297	redrlg. 7,570
Goodrum, George, No. 1 Baron, Devils Den, Kern	24-25-18	1,190	will deepen
Gibson Oil, No. 3 Alferitz, Devils Den, Kern	14-25-18	530	O. S. drlg.
Franco-Western Oil, No. 15, McKittrick, Kern	8-30-22	2,196	cleaning out
Leyse & Sonne, No. 1 Pasadena, McKittrick, Kern	28-30-22	3,064	sd. sh. drlg.
Chico-Martinez Oil, No. 1 Holly, South Belridge, Kern	1-29-20	1,020	cleaning out
Argo Pet., No. 1 Farnsworth, Lost Hills, Kern	11-26-20	1,332	bailing
Randan Pet., No. 1 Theta, Lost Hills, Kern	3-26-20	1,625	cmtd. 1,535
Shell Oil, No. 1 Voight, Antelope Plains, Kern	32-27-20	461	sd. sh. drlg.
Belridge Oil, No. 27-5 North Belridge, Kern	27-27-20	8,209	O. S. drlg.
Richfield Oil, No. 2 Belridge, North Belridge, Kern	22-27-20	7,371	br. sh. drlg.
Texas Co., No. 4 Martin, North Belridge, Kern	22-27-20	8,150	gr. sd. drlg.
General Pet., No. 1 St. Helens, Belridge, Kern	12-28-20	1,400	pump 10 b.d.
Crestmont Oil, No. 4 Staley, Round Mountain, Kern	8-28-29	1,144	sd. sh. drlg.
Shell Oil, No. 1-3 Olcese Estate, Round Mtn., Kern	16-28-29	1,401	sd. sh. drlg.
Shell Oil., No. 5-2 Olcese, Round Mountain, Kern	22-28-29	1,581	redrlg. 655
Honolulu Oil, No. 46, Round Mountain, Kern	20-28-29	1,973	pump 290 b.d.
McDonald & Dearin, No. 4, Kern Front, Kern	11-28-27	1,973	pump 115 b.d.
Rubenstein, A. B., No. 1 Lerdo, Kern	20-28-27	3,302	pump water
Oils, Inc., No. 4 Seven Spot, Kern River, Kern	13-28-27	1,255	O. S. drlg.
Fuhrman, Alfred, No. 25, Kern River, Kern	21-28-28	710	pump water
Helm & Smith, No. 5-A Kernco, Kern River, Kern	34-28-28	445	sd. sh. drlg.
Hast Oil, No. 3 Kern, Kern River, Kern	34-28-28	376	pump 20 b.d.
Shell Oil, No. 7 Mathews, Mount Poso, Kern	4-27-28	1,650	pump 245 b.d.
Western Gulf Oil, No. 4 Sawyer, Fruitvale, Kern	27-29-27	3,620	sd. sh. drlg.
Texas Co., No. 1 Lowe, Fruitvale, Kern	7-29-27	6,380	sd. sh. drlg.
Mesa Pet., No. 1 Dixon, Fruitvale, Kern	23-29-27	3,115	pump 15 b.d.
Hogan Pet., No. 11 Porter, Mountain View, Kern	29-30-29	5,079	flow 3,024 b.d.
Stevens, R. W., No. 1, Caliente Creek, Kern	22-30-30	720	sd. sh. drlg.
Petrex, Inc., No. 1 Edison, Arvin, Kern	32-31-30	5,240	sd. sh. drlg.
Continental Oil, No. 3-A, KCL, Wasco, Kern	8-27-24	8,875	sd. sh. drlg.
Continental Oil, No. 1 Seaboard, KCL, Wasco, Kern	26-27-24	12,270	hd. sh. drlg.
Standard Oil, No. 8-1-B, KCL, Wasco, Kern	17-27-24	8,492	sd. sh. drlg.
Standard Oil, No. 1 Mushrush, Wasco, Kern	7-27-24	5,790	sd. sh. drlg.
Superior Oil, No. 4 Wagner, Rio Bravo, Kern	35-28-25	11,554	flow 2,140 b.d.
Superior Oil, No. 2 Geissinger, Bravo, Kern	35-28-25	11,371	O. S. drlg.
Superior Oil, No. 3 Geissinger, Bravo, Kern	35-28-25	9,852	sd. sh. drlg.
Superior Oil, No. 1 Heibing, Rio Bravo, Kern	1-29-25	11,340	sd. sh. drlg.
Union Oil, No. 2 34, KCL, Rio Bravo, Kern	34-28-25	11,204	redrlg. 7,021
Union Oil, No. 3-34, KCL, Rio Bravo, Kern	34-28-25	11,206	sd. sh. drlg.
Union Oil, No. 4-34, KCL, Rio Bravo, Kern	34-28-25	7,753	sd. sh. drlg.
Getty Oil, No. 2 Ramsey, Rio Bravo, Kern	35-28-25	10,061	sd. sh. drlg.
General Pet., No. 1 Wagoner, Rio Bravo, Kern	35-28-25	10,192	redrlg. 9,995
General Pet., No. 4 Wagoner, Rio Bravo, Kern	35-28-25	2,987	sd. sh. drlg.
Standard Oil, No. 18-1 KCL, Una, Kern	29-28-26	9,670	sd. sh. drlg.
Shell Oil, No. 83-35 KCL, McFarland, Kern	35-26-25	9,050	sd. sh. drlg.
White, C. C., No. 1 Armstrong, McFarland, Kern	9-26-26	2,396	idle
Tide Water A., Well No. 1, Pond, Kern	17-26-25	6,752	sd. sh. drlg.
Dilmar Oil, No. 1 Quinn, Jasmin, Kern	15-25-27	2,875	looks wet
Standard Oil, No. 11-15 KCL, Greeley, Kern	18-29-26	7,735	cmtd. 7,700
Standard Oil, No. 12-5 KCL, Greeley, Kern	7-29-26	5,959	sd. sh. drlg.
Standard Oil, No. 2 Fleishauer, Greeley, Kern	20-29-26	8,396	sd. sh. drlg.
Superior Oil, No. 1 Krause, Greeley, Kern	21-29-26	8,178	deepening
Continental Oil, No. 1-E KCL, Stevens, Kern	17-30-26	8,574	P. B. 8,210
Standard Oil, No. 15-2 KCL, Canfield Ranch, Kern	27-30-26	8,122	sd. sh. drlg.
Shell Oil, No. 61-29-A KCL, Ten Section, Kern	29-30-26	4,992	sd. sh. drlg.
Shell Oil, No. 56-30-A KCL, Ten Section, Kern	30-30-26	7,650	sd. sh. drlg.
Shell Oil, No. 2-32-B KCL, Ten Section, Kern	32-30-26	936	sd. sh. drlg.
Shell Oil, No. 32-32-B KCL, Ten Section, Kern	32-30-26	8,100	sd. sh. drlg.
Shell Oil, No. 58-20-B KCL, Ten Section, Kern	20-30-26	8,212	sd. sh. drlg.
Shell Oil, No. 52-14-A KCL, Canal, Kern	14-30-25	6,990	sd. sh. drlg.
Ohio Oil, No. 7-E KCL, Canal, Kern	14-30-25	7,880	sd. sh. drlg.
Ohio Oil, No. 8-A KCL, Buena Vista Lake, Kern	32-31-26	11,186	cmtd. 11,147
Texas Co., No. 1 Pioneer, Midway-Sunset, Kern	33-11-23	8,626	hd. sh. drlg.
Midway Peerless Oil, No. 16, Midway-Sunset, Kern	15-31-22	1,210	pump 55 b.d.
Mascot Oil, No. 3 Midway, Midway-Sunset, Kern	36-32-23	1,404	redrlg. 660
Surprise Oil, No. 3, Midway-Sunset, Kern	36-32-23	1,221	rig to pump
National Oil, No. 18, Midway-Sunset, Kern	35-32-23	1,694	sd. sh. drlg.
Petrol Corp., No. 33-5 Reserve, Tejon Ranch, Kern	33-11-19	4,607	P. B. 4,582
Shell Oil, No. 4-26 KCL, San Emidio, Kern	26-11-22	9,824	P. B. 9,319
Richfield Oil, No. 1 KCL, Wheeler Ridge, Kern	28-11-20	4,480	sd. sh. drlg.
Pure Oil, No. 1 SPL, Cantua, Fresno	31-18-17	10,862	redrlg. 10,515
Magnet Oil, No. 2 Fearon, Fresno	28-11-20	4,480	sd. sh. drlg.
Jacalitos Oil, No. 1, Jacalitos Hills, Fresno	14-21-15	5,865	cleaning out
Pet. Sec., No. 2 Gatchell, Guijarral Hills, Fresno	18-20-16	6,893	flw. 10,000 b.d.
Dauphin Dev., No. 1 Boone, Alcalde, Fresno	30-21-14	3,778	P. B. 2,330
K. N. D. A., No. 67-20-J Kettleman North, Fresno	20-21-17	11,041	completing
K. N. D. A., No. 27-8-Q Kettleman North, Kings	6-22-18	4,481	sd. sh. drlg.
K. N. D. A., No. 38-8-Q Kettleman North, Kings	8-22-18	8,761	flow 3,266 b.d.
K. N. D. A., No. 27-16-Q Kettleman North, Kings	16-22-18	8,021	sd. sh. drlg.
K. N. D. A., No. 58-16-Q Kettleman North, Kings	16-22-18	8,100	sd. sh. drlg.
K. N. D. A., No. 47-18-Q Kettleman North, Kings	18-22-18	8,004	cleaning out
K. N. D. A., No. 43-20-Q Kettleman North, Kings	20-22-18	8,207	fish D. P.
K. N. D. A., No. 27-22-Q Kettleman North, Kings	22-22-18	7,060	sd. sh. drlg.
Standard Oil, No. 46-13-H Kettleman North, Fresno	13-21-16	10,836	fishing
Standard Oil, No. 78-1-P Kettleman North, Kings	1-22-17	8,000	gr. sd. drlg.
Standard Oil, No. 21-13-P Kettleman North, Kings	13-22-17	7,248	redrlg. 6,270
Standard Oil, No. 74-7-Q Kettleman North, Kings	7-22-18	7,740	sd. sh. drlg.
Standard Oil, No. 61-21-Q Kettleman North, Kings	21-22-18	5,574	sd. sh. drlg.
Texas Co., No. 1 Lewis, King City, Monterey	13-19-5	1,872	sd. sh. drlg.
Cal Pet. Prod., No. 1 Elkhorn, San Luis Obispo	6-10-25	1,972	sd. sh. drlg.
Hancock Oil, No. 1 Dick, Huasna, San Luis Obispo	30-12-33	4,330	sd. sh. drlg.
Ohio Oil, No. 1-A Willard, Willows, Glenn	18-20-2	5,697	sd. sh. drlg.
Richfield Oil, No. 1 Potrero Hills, Solano	10- 4-1	3,360	sd. sh. drlg.
Amerada Pet., No. 1 California Lands, Colusa, Colusa	34-16-1	3,830	sd. sh. drlg.
Texas Co., No. 1 Midland, Rio Vista, Sacramento	4- 3-3	4,030	P. B. 3,850

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well, location and county—	S.T.R.	Depth	Status
Apex Pet., No. 3 Elsie, El Segundo, Los Angeles	12- 3-15	7,271	schist; drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Acd., acidized.
B.O., barrels of oil.
B.P.D., barrels per day.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling or pulled big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdy. sh., sandy shale.
Sdtr., or St. sidetracking.
S.D.P.L., shut down for pipe line.
S.D.O., or S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting for cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.S.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., awaiting standard rig.
Wtr., water.

Burnoel Pet., No. 1 Elsie, El Segundo, Los Angeles	12-	3-15	7,025	sd. sh. drlg.
Sovereign Oil, No. 2, El Segundo, Los Angeles	12-	3-15	7,326	flow 620 b.d.
Treasure Oil, No. 3, Playa Del Rey, Los Angeles	21-	2-15	6,510	idle
Rolling Hills Oil, No. 1 Weston, Palos Verdes, L. A.	27-	4-14	4,215	cleaning out
Gypsy Oil, No. 16 Getty, Torrance, Los Angeles	14-	4-14	4,902	sd. sh. drlg.
Andrews & Mitchell, No. 11 Kirk, Torrance, L. Ang.	14-	4-14	4,577	sd. sh. drlg.
Allison & Oglesby, No. 1, Torrance, Los Angeles	14-	4-14	3,952	sd. sh. drlg.
Berken Oil, No. 2 McDonnell, Torrance, Los Angeles	23-	4-14	3,795	rigging up
Consolidated Pet., No. 2, Torrance, Los Angeles	23-	4-14	2,835	sd. sh drlg.
Cal-Oak Oil, No. 1 Devils, Torrance, Los Angeles	23-	4-14	4,205	cleaning out
Cal-Ridge Oil, No. 1 Meyer, Torrance, Los Angeles	23-	4-14	3,770	cleaning out
Ind. Drlg., No. 1 Mitchell, Torrance, Los Angeles	15-	4-14	4,810	redrlg. 4,396
Calmont Oil, No. 1 Talbert, Torrance, Los Angeles	23-	4-14	4,858	reaming
Eriksson, G., No. 1 Fortuna, Torrance, Los Angeles	23-	4-14	3,760	sd. sh. drlg.
Foster Corp., No. 1 Thomas, Torrance, Los Angeles	23-	4-14	3,900	cleaning out
Kovell Oil, No. 1 Lomita, Torrance, Los Angeles	22-	4-14	4,586	sd. sh. drlg.
Jones-Long Oil, No. 1 Lyons, Torrance, Los Angeles	23-	4-14	1,982	sd. sh. drlg.
Kiesau, A. H., No. 1 Rhoades, Torrance, Los Angeles	23-	4-14	3,790	rigging up
McCowan, C. T., No. 1-A Lindis, Torrance, L. Angeles	23-	4-14	3,680	sd. sh. drlg.
Morton & Elder, No. 1 Mitchell, Torrance, Los Ang.	23-	4-14	4,789	sd. sh. drlg.
McDonald & Burns, No. 2 Moore, Torrance, Los Ang.	23-	4-14	4,792	redrlg. 4,470
McDonald & Burns, No. 7 Moore, Torrance, Los Ang.	23-	4-14	5,006	sd. sh. drlg.
McCaslin, W. E., No. 2, Torrance, Los Angeles	14-	4-14	3,390	sd. sh. drlg.
Lomita Drlg., No. 1 Stevenson, Torrance, Los Angeles	23-	4-14	5,007	flow 931 b.d.
M. P. S. Oil, No. 1 Julian, Torrance, Los Angeles	14-	4-14	3,801	rigged up
Camp, C. W., No. 13, Torrance, Los Angeles	23-	4-14	5,009	sd. sh. drlg.
Doyle Pet., No. 3-A Getty, Torrance, Los Angeles	14-	4-14	5,634	P. B. 5,060
Elexico Oil, No. 2 Allen, Torrance, Los Angeles	23-	4-14	2,296	sd. sh. drlg.
Charleston Oil, No. 3 Marcoux, Torrance, Los Angeles	14-	4-14	5,001	pump 145 b.d.
Hampshire Oil, No. 1 Torrance, Los Angeles	23-	4-14	4,897	sd. sh. drlg.
Hughes, W., No. 2, Torrance, Los Angeles	14-	4-14	5,001	will deepen
Hujo Oil, No. 1, Torrance, Los Angeles	14-	4-14	3,985	sd. sh. drlg.
Krause & Baker, No. 2 Gladys, Torrance, Los Angeles	14-	4-14	3,795	rigged up
Peters Royalty, No. 2, Torrance, Los Angeles	14-	4-14	3,730	sd. sh. drlg.
Rico Oil, No. 1 Victoria, Torrance, Los Angeles	14-	4-14	3,776	cleaning out
Packard Pet., No. 1 Kelley, Torrance, Los Angeles	22-	4-14	4,651	sd. sh. drlg.
Packard Pet., No. 2 Kelley, Torrance, Los Angeles	22-	4-14	3,384	sd. sh. drlg.
Standard Oil, No. 1-12 Marble, Torrance, Los Angeles	23-	4-14	3,820	cleaning out
Star Pet., No. 2 G & A, Torrance, Los Angeles	23-	4-14	3,388	sd. sh. drlg.
Sol Oil, No. 1 Lomita, Torrance, Los Angeles	23-	4-14	3,825	cleaning out
Silver Strand Oil, No. 1, Torrance, Los Angeles	14-	4-14	2,161	sd. sh. drlg.
Silver Beach Oil, No. 1, Torrance, Los Angeles	23-	4-14	4,955	sd. sh. drlg.
Texas Co., No. 11 Wilson, Torrance, Los Angeles	14-	4-14	5,026	cleaning out
Imperial Gypsum, No. 2 Getty, Torrance, Los Angeles	14-	4-14	4,641	sd. sh. drlg.
Imperial Gypsum, No. 3 Pathoff, Torrance, Los Ang.	14-	4-14	3,747	cleaning out
Wilton Oil, No. 4, Torrance, Los Angeles	22-	4-14	4,995	flow 310 b.d.
Woolner Oil, No. 4 Lomita, Torrance, Los Angeles	14-	4-14	3,754	rigging up
Zenith Oil, No. 1, Torrance, Los Angeles	5-	5-14	3,570	sd. sh. drlg.
C. C. M. O., No. 8, Torrance, Los Angeles	15-	4-14	3,723	redrlg. 3,530
C. C. M. O., No. 13, Torrance, Los Angeles	15-	4-14	4,989	pump 225 b.d.
C. C. M. O., No. 16, Torrance, Los Angeles	15-	4-14	3,730	rebldg. rig
Hansco Oil, No. 1 Gladys, Torrance, Los Angeles	14-	4-14	5,000	flow 305 b.d.
Stabler, W., No. 2 Marland, Dominguez, Los Angeles	3-	4-13	4,375	pump 260 b.d.
Union Oil, No. 58 Callender, Dominguez, Los Angeles	33-	3-13	7,550	P. B. 3,474
Union Oil, No. 62 Callender, Dominguez, Los Angeles	33-	3-13	5,461	sd. sh. drlg.
Shell Oil, No. 95 Reyes, Dominguez, Los Angeles	33-	3-13	7,050	sd. sh. drlg.
Barnsdall Oil, No. 4 Trust, Rosecrans, Los Angeles	18-	3-13	7,750	O. S. drlg.
Barnsdall Oil, No. 9 Rosecrans, Rosecrans, Los Ang.	18-	3-13	4,985	sd. sh. drlg.
Union Oil, No. 20 Rosecrans, Rosecrans, Los Angeles	18-	3-13	6,990	sd. sh. drlg.
Union Oil, No. 21 Rosecrans, Rosecrans, Los Angeles	19-	3-13	6,270	sd. sh. drlg.
Union Oil, No. 22 Rosecrans, Rosecrans, Los Angeles	19-	3-13	3,364	sd. sh. drlg.
Union Oil, No. 23 Rosecrans, Rosecrans, Los Angeles	18-	3-13	6,824	sd. sh. drlg.
Universal Consd., No. 4 Trust, Rosecrans, Los Ang.	18-	3-13	5,781	sd. sh. drlg.
Superior Oil, No. 1 Callender, Rosecrans, Los Angeles	20-	3-13	6,793	sd. sh. drlg.
Howard Oil, No. 1 Gordon, Rosecrans, Los Angeles	19-	3-13	6,596	redrlg. 4,851
Barnsdall Oil, No. 3 S.F., Newhall, Los Angeles	26-	4-17	6,770	O. S. drlg.
Tide Water A., No. 1 Porter, San Fernando, Los Ang.	27-	3-16	967	hd. sd. drlg.
Royal Lands, No. 1 Ramona, Castaic, Los Angeles	8-	4-17	730	sd. sh. drlg.
General Pet., No. 3 Blinn, Wilmington, Los Angeles	4-	5-13	3,643	P. B. 3,526
General Pet., No. 16 Harbor, Wilmington, Los Ang.	2-	5-13	2,940	flow 220 b.d.
General Pet., No. 44 Harbor, Wilmington, Los Ang.	2-	5-13	2,131	sd. sh. drlg.
General Pet., No. 10 S.P., Wilmington, Los Angeles	3-	5-13	4,050	O. S. drlg.
Allied Pet., No. 28, Wilmington, Los Angeles	32-	4-13	3,363	flow 205 b.d.
Bankline Oil, No. 7-U.P., Wilmington, Los Angeles	2-	5-13	2,497	sd. sh. drlg.
Burns Oil, No. 1, Wilmington, Los Angeles	32-	4-13	2,985	sd. sh. drlg.
Hancock Oil, No. 10-B, Wilmington, Los Angeles	2-	5-13	4,042	O. S. drlg.
Hancock Oil, No. 24-C, Wilmington, Los Angeles	2-	5-13	4,192	P. B. 4,124
Hollywood Oil, No. 2 Baxter, Wilmington, Los Ang.	35-	4-13	3,656	sd. sh. drlg.
Macson Oil, No. 1-55-O, Wilmington, Los Angeles	32-	4-13	3,673	O. S. drlg.
Richfield Oil, No. 1-P.D., Wilmington, Los Angeles	2-	5-13	3,925	O. S. drlg.
Richfield Oil, No. 4-P.D., Wilmington, Los Angeles	2-	5-13	3,098	sd. sh. drlg.
Richfield Oil, No. 5-P.D., Wilmington, Los Angeles	2-	5-13	3,644	flow 1,950 b.d.
Richfield Oil, No. 7-P.D., Wilmington, Los Angeles	2-	5-13	3,830	sd. sh. drlg.
Richfield Oil, No. 9-P.D., Wilmington, Los Angeles	2-	5-13	2,140	sd. sh. drlg.
Richfield Oil, No. 3-P.G., Wilmington, Los Angeles	2-	5-13	3,984	O. S. drlg.
Royalty Serv., No. 1-P.E., Wilmington, Los Angeles	2-	5-13	3,760	sd. sh. drlg.
Republic Pet., No. 1 Harbor, Wilmington, Los Angeles	2-	5-13	4,020	O. S. drlg.
Republic Pet., No. 2 Harbor, Wilmington, Los Angeles	2-	5-13	4,040	O. S. drlg.
Republic Pet., No. 3 Harbor, Wilmington, Los Angeles	2-	5-13	2,910	O. S. drlg.
Selegna Oil, No. 17 Harbor, Wilmington, Los Angeles	32-	4-13	2,167	sd. sh. drlg.
Tide Water A., No. 1 Ban., Wilmington, Los Angeles	29-	4-13	5,160	hd. sh. drlg.
Universal Consd., No. 1 Newport, Wilmington, L. A.	2-	5-13	2,190	sd. sh. drlg.
Universal Consd., No. 4 Newport, Wilmington, L. A.	2-	5-13	4,083	O. S. drlg.
Union Pacific, No. 84, Wilmington, Los Angeles	3-	5-13	3,992	O. S. drlg.
Union Pacific, No. 85, Wilmington, Los Angeles	3-	5-13	2,351	sd. sh. drlg.
Union Pacific, No. 87, Wilmington, Los Angeles	3-	5-13	2,564	sd. sh. drlg.
Union Pacific, No. 9-E, Wilmington, Los Angeles	3-	5-13	4,085	flow 920 b.d.
Union Pacific, No. 11-E, Wilmington, Los Angeles	3-	5-13	2,432	sd. sh. drlg.
Union Pacific, No. 1-P.D., Wilmington, Los Angeles	3-	5-13	4,073	sd. sh. drlg.
Union Pacific, No. 2-P.D., Wilmington, Los Angeles	3-	5-13	4,130	flow 841 b.d.
Union Pacific, No. 3-P.D., Wilmington, Los Angeles	3-	5-13	2,198	sd. sh. drlg.
Wilgate Oil, No. 1 Harbor, Wilmington, Los Angeles	2-	5-13	5,670	sd. sh. drlg.
Wilmington O. & D., No. 1 Harbor, Wilmington, L. A.	33-	4-13	5,700	flow 310 b.d.
St. Helens Pet., No. 27 Monterey, Montebello, L. A.	2-	2-12	6,173	O. S. drlg.
St. Helens Pet., No. 28 Monterey, Montebello, L. A.	2-	2-12	4,896	sd. sh. drlg.
St. Helens Pet., No. 2 Eggleston, Montebello, L. Ang.	2-	2-12	4,687	sd. sh. drlg.
Union Oil, No. 2 H. & S., Montebello, Los Angeles	2-	2-12	3,586	sd. sh. drlg.
V-8 Oil, No. 1 Estelle, Montebello, Los Angeles	2-	2-12	4,891	sd. sh. drlg.
West Mon. Oil, No. 2 Seavers, Montebello, Los Ang.	2-	2-12	3,984	sd. sh. drlg.
Standard Oil, No. 1 McDonald, Montebello, Los Ang.	2-	2-12	5,491	sd. sh. drlg.
Herley-Kelley, Inc., No. 1 Burke, Montebello, L. Ang.	2-	2-12	5,998	sd. sh. drlg.
McVicar & Rood, No. 2 Manz, Montebello, Los Angeles	2-	2-12	4,992	sd. sh. drlg.
Brookline Oil, No. 1 Drake, Montebello, Los Angeles	2-	2-12	6,444	sd. sh. drlg.
Security L. & W., No. 1 Tobey, Whittier, Los Angeles	8-	2-11	1,560	sd. sh. drlg.
Hilldon Oil, No. 4 Amebco, No. Long Beach, L. Ang.	13-	4-13	4,494	flow 170 b.d.
Hilldon Oil, No. 1 Dominguez, No. Long Beach, L. A.	14-	4-13	7,788	swab. 125 b.d.
Johnston Drlg., No. 34, Long Beach, Los Angeles	13-	4-13	2,981	sd. sh. drlg.
Texas Co., No. 1 Willson, Long Beach, Los Angeles	29-	4-12	4,680	sd. sh. drlg.
De Soto Oil, No. 1, Long Beach, Los Angeles	30-	4-12	3,985	sd. sh. drlg.
Texas Co., No. 3 Pearce, Huntington, Orange	2-	6-11	4,497	P. B. 4,030
Brea Canyon Oil, No. 48, Brea Canyon, Orange	2-	3-10	4,790	sd. sh. drlg.
Battersby, J. M., No. 1 Carmenita, Orange	21-	3-11	5,288	sd. sh. drlg.
Alford Dev., No. 1 Yorba, Richfield, Orange	29-	3-9	1,715	sd. sh. drlg.
Shell Oil, No. 1 Cuff, Richfield, Orange	29-	3-9	3,000	sd. sh. drlg.
Shell Oil, No. 1 Swain, Richfield, Orange	28-	3-9	1,266	sd. sh. drlg.
Shell Oil, No. 1 Hemphill, Richfield, Orange	30-	3-9	2,471	sd. sh. drlg.
Millerand Pet., No. 1 Miller, Yorba, Orange	22-	3-9	1,734	rig to pump
Brown & Co., No. 2 Hurley, Yorba, Orange	22-	3-9	1,429	sd. sh. drlg.
Beth Oil, No. 1 Dillingham, Yorba, Orange	21-	3-9	2,351	cmtd. 2,256
Signet Oil, No. 2 Kraemer, Yorba, Orange	21-	3-9	2,340	sd. sh. drlg.
Pearl J. Oil, No. 1 Dobashi, Yorba, Orange	21-	3-9	1,801	pump 120 b.d.
A. V. Oil, No. 1, Costa Mesa, Orange	16-	6-10	3,530	sd. sh. drlg.
Congress Oil, No. 1, Santa Ana, Orange	36-	3-9	2,980	bailing
So. Counties Oil, No. 1 Club, Serranco, S. Bernardino	22-	2-8	353	sd. sh. drlg.

KANSAS

Week Ending July 9 (Descriptions are East unless marked otherwise)

Barton County

Armer & Vernon No. 1 Seyfert, NW SW NE sec. 3-17-13w. Arb. 3,380 ft.; T.D 3,398 ft.; pot. 282 B.O.P.D.

Colonial Oil No. 1 Lust, NW NE sec. 19-17-13w. Arb. 3,519-35 ft.; T.D. 3,566 ft.; D.&A.

Crown Pet. Corp. No. 1 Wolf, SE SW SE sec. 36-19-12w. T.D. 3,237 ft.; W. O.C.

R. E. Day et al No. 1 Felts, SE SE NE sec. 14-16-12w. T.D. 1,875 ft.; abd.

Gardner & Murfin No. 1 Krug, SW SE sec. 16-16-13w. Drlg. 880 ft.

Kessler O. & G. No. 1 Bowman, SW NE sec. 22-20-16w. Drlg. 1,580 ft.

Butler County

T. S. Dustin No. 1 Miley, SE NW NE sec. 17-27-5e. T.D. 2,008 ft.; S.G.; S.D.

Heilman & Harwood No. 1 Sawyer, SE NE NE sec. 10-28-7. Drlg. 2,680 ft.

National Ref. No. 1 Wentz, SE NE NW sec. 7-27-6. Drlg. 400 ft.

Rex & Morris No. 1 Newby, SW SE sec. 16-26-7. T.D. 2,340 ft.

Max Steinbuchel et al No. 1 Fox, NW SE NE sec. 25-26-3. Drlg. 2,770 ft.

Coffey County

Western Kans. O. & R. Co. No. 1 Knapp, SW SW NW sec. 27-22-14. Spd.

Cowley County

Hutchinson O. & G. Co. No. 1-A Ketchen, SW SE SE sec. 11-35-5. Drlg. 2,340 ft.

Smith et al No. 1 Wilson, SE SW NW sec. 9-33-6. S.O. at 3,096 ft.; 600 ft. F.I.H. in 2 days; T.D. 3,149 ft.; P.B. 3,110 ft.; est. 60 B.O.P.D.; shot at 3,-100 ft.; C.O.

Dickinson County

Fred Franks et al No. 1 Huffman, NW NW sec. 11-13-1e. S.D. 1,177 ft.

Ellis County

Carter Oil No. 1 Sottschalk, NW SE sec. 36-15-18w. W.O.C. 74 ft.

Cities Service No. 1 Hall, CEL W½ NE sec. 35-11-17w. Arb. 3,637-75 ft.; no shows; D.&A.

Ellsworth County

Cities Service No. 1 Gibson, SW SE NE sec. 10-18-8w. R.U.R.

Cities Service et al No. 2 Schroeder "A." CNL SW sec. 29-17-9w. Drlg. 1,310 ft.

Finney County

Atlantic Ref. Co. No. 1 Nunn, C SE NE sec. 27-21-34w. T.D. 4,667 ft.; swb. 256 B.O. in 12 hrs.

Ford County

Sinclair Prairie Oil Co. No. 1 Young, CSL NE sec. 34-27-21w. Viola 5,350 ft.; dolomite at 5,512 ft.; Wilcox 5,-617 ft.; Arb. 5,629 ft.; T.D. 5,930 ft.; P.B. 5,025 ft.; drlg. cmt.

Graham County

C. E. Schlemeyer No. 1 Belveal, C SE NW sec. 3-8-24w. Drlg. 700 ft.

Greenwood County

Smalley & Stauffer No. 1 Samples, SE NW NE sec. 15-26-13. Drlg. 1,505 ft.

C. C. Whitaker et al No. 1 Bressner, NW SE sec. 8-26-13e. T.D. 1,498 ft.; 1,000,000 ft. gas est.; P.B. 1,495 ft.; p. 14 B.O. and 175 B.W.P.D. for 4 days; D.&A.

Jackson County

Haverback et al No. 1 Marble Bank, C NE NE sec. 26-9-14. S.D. 2,588 ft.

Lane County

Phillips Pet. Co. No. 1 Kees, C SE SE sec. 3-19-30w. T.D. 4,911 ft.; D.&A.

Valerius & Marshall No. 1 Schierecks, C SE sec. 8-18-30w. R.U.R.

Marion County

Johnson et al No. 1-A Miltz, SW SW SW sec. 24-17-4. T.D. 1,130 ft.; C.O.

Ness County

Jones & Lane No. 1 Page, SE NW sec. 36-18-26w. T.D. 3,270 ft.; S.D.

Mid-Continent Oil Co. No. 1 Collins, NW NW sec. 24-20-26w. Drlg. 2,880 ft.

Schoeppel & Elmore No. 1 Moses, C SW NW sec. 10-18-25w. T.D. 4,353 ft.; acd. p. 600 B.O.P.D.

Ottawa County

Babcock Oil No. 1 Copeman, NW NW sec. 18-10-2w. Fsg. 432 ft.

Pratt County

Tidewater No. 1 Jarboe, C NL SE sec. 25-26-14w. Drlg. 4,458 ft.

Reno County

L. E. Douglas et al No. 1 Durand SE SE SW sec. 3-23-5w. Drlg. 3,600 ft.

Rice County

C. L. Carlock No. 1 Heinz, NW SE sec. 8-18-10w. Drlg. 2,803 ft.

Marylyn Oil Co. et al No. 1 Vincent, NW NW NE sec. 5-21-10w. Drlg. 3,357 ft.

Shell Pet. et al No. 1 Cramm, CNL NE sec. 15-19-9w. Arb. 3,240 ft.; Dol. 3,-246 ft.; S.S.O.

Riley County

Coronado Oil et al No. 1 Parks, SE SE sec. 16-10-8. U.R. 1,400 ft.

Rooks County

H. V. Elwell and Tree Oil No. 1 Blair, SE SW sec. 34-10-19w. Loc.

Fred Haines et al No. 1 Don, SE SE SW sec. 13-9s-16w. Drlg. 1,825 ft.

J. J. Hall No. 1 Kruse, SE NE sec. 3-10-16w. T.D. 3,124 ft.; 1,000 ft. O.I.H. in 2 days; U.R.

F. O. Haun No. 1 Gavenhorst, SE SE sec. 7-6-16w. M.I.M.

Producers Oil Co. No. 1 Ham, SW SW NW sec. 25-7-19w. S.D. 1,410 ft.

Rush County

Phillips Pet. Co. No. 1 John Kees, C SE SE sec. 3-19-20w. T.D. 2,500 ft.; S.D. for csg.

Russell County

Aylward Prod. Co. No. 1 Salbach, SE NE sec. 31-14-14w. Drlg. 2,755 ft.

Coralena No. 1 Hefferman, NE SE SW sec. 34-14-13w. T.D. 2,913 ft.; 150 ft. O.I.H. in 13 hrs.; C.O.

J. J. Hall No. 1 Landon, SW SE sec. 11-15-14w. T.D. 3,100 ft.; 1,800 ft. O.I.H.; W.O.C.

Phillips Pet. Co. No. 1 Miller, C NW SW sec. 29-13-14w. K.C. L. 3,044 ft.; Arb. 3,310 ft.; T.D. 3,311 ft.; drlg. plug to 3,310 ft.; S.O.

R. H. Shields No. 1 Anschutz, SW SE sec. 2-14-13w. Drlg. 3,362 ft.

R. H. Shields No. 1 Rogg, CEL W½ NW sec. 9-15-13w. Drlg. 2,160 ft.

Smith & Unruh No. 1 Stielow, NW cor. sec. 32-11-14w. T.D. 2,552 ft.; S.D.

W. I. Southern No. 1 Letsch, NE SW SW sec. 17-15-13w. Cg. 2,965-83 ft.; good sat.

Sedgwick County

D. M. Crowe et al No. 1 Murphy, SW SW SE sec. 34-29-1w. Rlg.

Frank Hudson et al No. 1 Fulton, NE SE sec. 35-28-1e. S.D. 2,248 ft.

Natl. Ref. No. 1 Trustee, SE NE sec. 8-27-2. U.R. at 2,954 ft.

Union O. & R. Co. et al No. 1 Howell, SW cor. sec. 6-29-1e. Drlg. 3,550 ft.

Stafford County

Austin Drlg. Co. No. 1 Slade, NE NW sec. 35-25-12w. T.D. 3,873 ft.; S.D.

Cities Service No. 1 Smith, CWL SW sec. 16-21-11w. Drlg. 902 ft.

Kenneth Harris No. 1 Barnes, NW cor. sec. 8-21-12w. Loc.

Western Kans. O. & R. No. 1 Barnes, NW NW sec. 8-21-12w. Drlg. 2,620 ft.

Sumner County

Hapenney et al No. 1 Evers, SE SE NE sec. 27-31-2e. O.W.D.D.; T.D. 2,030 ft.; W.O.C.

Murphy et al No. 1 Tate, SE NW sec. 31-32-2e. T.D. 3,747 ft.; Arb.; 2,040 ft. O.I.H.; swb. 57 B.O. in 19 hrs.; 400 ft. off bttm.

Woodson County

Cleveland Oil Co. et al No. 1 Fidelity. SE SE NE sec. 34-25-15. T.D. 1,436 ft.; est. 8 B.O.P.D.; grav. 34.6; C.O.

Cyr Gas et al No. 1 Schrieber, SE SW SE sec. 8-25-14. S.D. 1,265 ft.

Ward McGinnis No. 1-A Hill, C SW SE sec. 32-26s-15. Drlg. 760 ft.

Phil-Han Oil No. 1 Evans, NW SE sec. 21-23-15. T.D. 1,545 ft.; acdz.; est. 15 B.O. and 40 B.W.P.D.

Max Steinbuchel No. 1 States, NW NE NW sec. 15-26-14. C.O. at 1,150 ft.
M. J. Trott No. 1 O'Neal, SE SE sec. 21-25-14. Drlg. 1,460 ft.

Thomas County

Connelly et al No. 1 fee, NW SE SE sec. 4-10-35w. T.D. 132 ft.; S.D.

OKLAHOMA

Week Ending July 9

NORTHERN OKLAHOMA

Adair County

Maddon-Penn Mutual Life Ins. Co., C S½ NE NW sec. 5-16-24. T.D. 520 ft.; S.D.

Cleveland County

W. A. Delaney et al No. 1 Bugher, SE SE SW sec. 12-7-2w. T.D. 7,682 ft.; drld. out to 7,672 ft.; f. 330 B.O. and 711 B.W. in 16 hrs.; still tstg.

Coal County

Carter et al No. 1 Mote, C E½ SW NW sec. 19-2-9. Drlg. 4,437 ft.

Comanche County

Midnite O. & G. Co. No. 1 Howe, NW NW NW sec. 20-2n-12w. S.D. 334 ft.
Clyde Roach No. 1-A Green, SE SE SW sec. 2-1n-13w. T.D. 760 ft.; S.D.

Creek County

M. W. Mosier et al No. 1 Holcomb, SE SW NW sec. 19-18-8. T.D. 3,018 ft.; 2,000 ft. W.I.H. and S.S.O.; S.D.

Ellis County

E. Fletcher No. 1 Wahl, NW NW NW sec. 1-19-25w. T.D. 694 ft.; S.D.

Garfield County

I.T.I.O. No. 1 Kechin, C SE SE sec. 17-22-5w. Drlg. 3,680 ft.
J. E. Kendall et al No. 1-A State, SW cor. sec. 13-23-3w. Est. 2,000,000 ft. gas at 1,010-35 ft.; T.D. 1,070 ft.; S.D.

Garvin County

First Natl. Oil Co. No. 1 Butterly, NE NE SE sec. 22-1n-1e. Flwg. by hds. while drlg. 2,659 ft.

Greer County

J. H. Everitt No. 1 Graumann, NE NW NW sec. 11-5-21w. T.D. 550 ft.; S.D.

Hughes County

Homer Doup et al No. 1 Bank, NE NE NW sec. 7-7-9. S.D. 1,050 ft.
Phillips Pet. Co. No. 1 Becker, NE NW SW sec. 8-5-10. T.D. 6,286 ft.; plug. 5,612 ft.; drld. out to 5,660 ft.; flwd. 629 B.O. and 1,887 B.W. in 9 hrs.
Troup & Strickland No. 1 Brown, NW SW NE sec. 32-6-8. S.D. 660 ft.

Kay County

Champlin Ref. Co. No. 1 Boehm, SW SW NE sec. 24-27-4. T.D. 950 ft.; S.D.
Helmerich & Payne No. 1 Sch. Ld., SW SE SW sec. 16-28-1w. Wilcox 3,530 ft.; 2nd Wilcox 3,603 ft.; T.D. 3,645 ft.; f. gas 5 min. and then oil 25 min.; drlg. plug.
Clark C. Nye No. 1 Willin, SE SE SW sec. 24-27-4. Cg. 3,016 ft.; S.S.O.&G.; S.D. for mach.
E. J. Shaffer et al No. 1 McKee, NE NW sec. 20-28-1w. T.D. 2,500 ft.; S.D.

Kingfisher County

Hollenback & Haley No. 1 Zerger, C SE SW sec. 5-18-6w. T.D. 205 ft.; S.D. for gas.

Kiowa County

Anderson-Prichard Oil Corp. No. 1 Sch. Ld., SE SE SE sec. 14-6n-17w. T.D. 1,254 ft.; S.S.O.
Gauntt & Baker No. 1 Parks, NW NW SW sec. 29-7-20w. T.D. 1,075 ft.; P.B. 900 ft.; wtr. at 921-23 ft.; T.D. 1,075 ft.; abd.
Hughes & Reese No. 1 Fultz, SE SE SE sec. 10-6-18w. Drlg. new hole at 1,183 ft.

Lincoln County

Indian States No. 1 Bailey, NW NW NE sec. 2-12-5. T.D. 3,260 ft.; drlg. plug.

Logan County

Sinclair-Prairie No. 1 Crews, SW SW NE sec. 27-16-1e. T.D. 5,223 ft.; shot twice and flwd. 192 B.O. in 13 hrs.; acdz.; 3,000,000 ft. gas; S.I.
Sunerior Oil of Calif. No. 1 McCulley, C W½ NW NW sec. 26-16-4w. Drlg. 5,390 ft.

Muskogee County

T. P. Clants No. 1 Jennings, NW NW NE sec. 8-13n-19. S.D. 1,100 ft.
Heydrick No. 1 Paschall, NE SE NW sec. 22-13n-19. S.D. 678 ft.

Noble County

Big Chief No. 1 Hoy, SE SE SW sec. 33-21-2w. Drlg. 3,150 ft.
H. R. Hollenback No. 1 Mathews, C SW NW sec. 9-20-1. W.O.C. 210 ft.
Texas-Canadian Oil Corp. No. 1 Schultz, NE NE NE sec. 29-23-1w. Drlg. plug at 261 ft.

Okfuskee County

C. W. Titus No. 1 Lehmar, C NE NE sec. 26-11-8. Drlg. 2,270 ft.

Oklahoma County

Fain Drlg. No. 1 Little, SW SW NE sec. 28-11-3w. Drlg. 2,300 ft.
Olson Oil No. 1 L. Vaneck, SE SW NW sec. 4-12-3w. Drlg. 3,190 ft.

Okmulgee County

Manahan Oil Co. No. 1 Kennedy, NE NW NE sec. 31-14-11. Drlg. 2,631 ft.

Osage County

Chevalier-Simon No. 1 Osage, NW NW SW sec. 33-27-5. Gas 3,074 ft.; Miss. 3,154-68 ft.; no shows; S.D.O.
Norbla Oil Co. No. 1 Osage, SE cor. sec. 18-25-7. T.D. 2,784 ft.
Norbla No. 2 Osage, SW SW SE sec. 30-22-9. T.D. 2,296 ft.; est. 2,000,000 ft. gas.
Wah Sha She Oil Co. No. 1 Osage, NE NE NW sec. 4-28n-9. S.D. 2,160 ft.

Payne County

Texas Co. No. 1 Logan, C W½ NW NW sec. 12-17-1e. T.D. 4,956 ft.; flwd. 525 B.O. in 13 hrs.; est. 600,000 ft. gas, grav. 46; ran tbg. to 4,944 ft. and flwd. 275 B.O. in 6½ hrs.; opened and would not flow; S.I.

Pittsburg County

Supreme Oil Co. No. 1 Stevenson, SW SW SE sec. 27-3n-14. S.D. 75 ft.

Pontotoc County

Caloma Oil Corp. No. 1 Brents, SE NE SW sec. 4-1n-6. T.D. 1,707 ft.; S.D.; lost circ.
Farmers Mutual Royalty Corp. No. 1 Waite, NE NE NW sec. 9-5-5. Wilcox sd. 3,200 ft.; T.D. 3,234 ft.; P.B. to 2,880 ft.; cmtg.
H. W. Lee No. 1 Weatherby, NW SE NW sec. 24-1n-7. S.D. 700 ft.
Jack Lynch et al No. 1-A Parker, SW SW SE sec. 17-4-8. T.D. 4,572 ft.; P.B. 4,490 ft.; rec. 300 ft. S.W. and S.D.
Union Dev. Co. No. 1-A Abbott, SW NW NE sec. 34-3-6. Drlg. 2,013 ft.

Pottawatomie County

Atlantic Ref. Co. No. 1-A McCurry, NW NE SW sec. 6-6-4. Drlg. 1,650 ft.
Pure Oil Co. No. 1 Lack et al, SE SW NW sec. 3-6-5. T.D. 4,270 ft.; P.B. 4,100 ft.; acdz. and pmp. 320 B.W. in 24 hrs. and S.D.
J. F. Smith et al No. 1 Henderson, NW NW NE sec. 4-5-3. Drlg. 3,408 ft.

Seminole County

Boetcher O. & G. No. 1 Morgan, SE NE NW sec. 8-5n-7. Drlg. 1,405 ft.
Denver P. & P. No. 1 Mathis, SW NW SW sec. 7-6-6. Dol. 3,760 ft.; cmtg at 3,700 ft.; p. 45 B.O. in 24 hrs., 14% wtr.
Farmers Mutual Royalty Corp. No. 1 Sch. Ld., SE SE NW sec. 16-5-5. Drlg. 1,390 ft.
Indian States et al No. 1 Johnson, NE SE NE sec. 2-6-5. T.D. 3,004 ft.; P.B. 2,850 ft.; shot and S.D.O.
R. McQueen et al No. 1 Harris, SW SW SW sec. 30-7-6. Drlg. 2,170 ft.
Southern Oil Co. No. 1 Rainey, NW NE SE sec. 12-7-5. Drlg. 1,565 ft.
Young & Newsom No. 1 Edgeman, SE SE SE sec. 17-7-6. T.D. 3,504 ft.; S.D.O. 6-8 hrs.; comp.

Washita County

L. B. McWhirter No. 1 fee, NW SW SW sec. 34-8-19w. T.D. 2,147 ft.; W. O.C.

SOUTHERN OKLAHOMA

Atoka County

C. M. Sheldon and Gardner Pet. Co. No. 1 Lee, NE NW SW sec. 2-4s-10e. T.D. 3,175 ft.; S.D.

Carter County

Texas Co. No. 1-B Cathey, SE NE NE sec. 6-5s-1w. T.D. 5,685 ft.; P.B. 5,477 ft.; pmpd. 10 B.O.P.D.; pumpd. off in 6-8 hrs.

Choctaw County

Clyde Ross et al No. 1 Hardy, SE SE NW sec. 21-7s-15. Drlg. 900 ft.

Creek County

L. B. Jackson No. 1 Berryhill, NW NW NW sec. 1-18n-10. Drlg. 250 ft.

Jefferson County

Bridwell Oil Co. No. 1 Seay, SE SW NW sec. 29-6s-5w. Drlg. 1,300 ft.

Love County

Mossad & Swainsberger No. 1 Barrett, N SE SE sec. 14-6s-2w. T.D. 1,890. ft.; S.D.
Sinclair Prairie Oil Co. No. 1 Peabody, NE cor. sec. 35-6s-2w. T.D. 5,961 ft.; P.B. 5,585 ft.; fsg.

Marshall County

E. W. Hughes Drlg. Co. et al No. 1 Vittitoe, C NE SE sec. 11-5s-4e. S.D. 7,106 ft.

Stephens County

Coline Oil Co. No. 1 Johnson, C SW SE SE NE sec. 1-2n-8w. T.D. 10,000 ft.; 9,050 ft.; made several hd. flws., 37-grav. oil. placed on gas-lift.

Tillman County

Smith No. 2 Hammell, NE NW NW sec. 6-5s-15w. T.D. 2,000 ft.; S.D.

LOUISIANA

N. LOUISIANA WILDCATS

Bienville County

DeSoto O. & G. Co. No. 1 Fleming, C NW NW sec. 18-16-9. R.U.
Gulf Ref. Co. No. 1 Goodpine, sec. 25-14-8. Ran Schlumberger; drlg. sdy. L. 10,762 ft.

Bossier Parish

C. H. French No. 5 Larkin, NW cor. SW sec. 14-19-11. Comp.; 20 B.P.D.; 6-in. csg. 364 ft.; T.D. 384 ft.
C. H. French No. 6 Larkin, SW sec. 14-19-11. Set 6-in. csg. 367 ft.
Premier Inv. Co. No. 1 McDade, SE SW NE sec. 28-19-11. Tstd. est. 1,000,000 ft. gas; S.I.; T.D. 2,374 ft.
Sloan, Lloyd et al No. 1 Sherrill, sec. 12-19-12. T.D. 780 ft.; set 5½-n. 778 ft.; trtd. with 1,000 gal. acd.; tstd. dry; W.O.
Union Prod. Co. No. 3-C Skannel, NE cor. sec. 13-17-12. D.S.T. 3,005-21 ft. tstd. 60 ft. mud cut with oil; 520 ft. oil; 420 ft. S.W. in 15 min.; O. sd. 3,015-21 ft.; set 5½-in. csg. 3,108 ft.; tstd. S.W. 3,122 ft.; P.B. 3,105 ft.; perf. 3,096-3,104 ft.; swbg. S.W. 3,906-3,104 ft.; set cmt. plg. 3,085 ft.; comp. 30 B.P.H.; ¼-in. ck.; T.P. 140 lbs.; C.P. 100 lbs.; old T.D. 3,122 ft.; T.D. 3,110 ft.; reperf. 3,094-3,104 ft.; acdzd. with 2,000 gal.

Caddo Parish

R. E. Allison No. 1 Ellerbee et al., NW cor. sec. 27-18-14. Set 7-in. csg. 6,025 ft.; W.O.C.
J. E. Carroll et al No. 1 Stiles, SW cor. NE sec. 17-21-16. Set 10-in. csg. 40 ft.; S.D. 1,005 ft.
W. D. Chew No. 3 Stiles, sec. 33-21-16. Set 10¾-in. csg. 65 ft.; drlg. sh. 600 ft.
J. T. Driscoll No. 4 Self, NE SE sec. 10-20-15. Set 6-in. csg. 2,186 ft.; T.D. 2,192 ft.; comp.; pmpg. 130 B.P.D.
Falcon Oil Co. No. 2 Glassell-Youree, SE cor. sec. 26-20-15. Drlg. sh. 1,420 ft.
C. G. Gibbons No. 1-A State Lv. Bd., sec. 17-21-16. Drlg. 30 ft.
W. K. Hutchinson hrs. No. 1 fee, sec. 3-15-12. R.U.
E. W. McGoidrick No. 8 Muslow, sec. 32-21-15. Set 6⅝-in. csg. 1,351 ft.; T.D. 1,525 ft.; bailing to test.
Midfield Oil Co. No. 4 Muslow, C NE SW sec. 6-20-15. Drlg. 985 ft.
J. F. Mitchell No. 2 Muslow, sec. 31-21-15. Set 6-in. csg.; W.O.S.R. 1,649 ft.
Oils, Inc., No. 1 Cazaux, sec. 10-16-13. S.D. 1,400 ft.
Petroleum Heat & Power Co. No. 1 Wemple, NW cor. sec. 14-20-15. Set 6-in. csg. 2,185 ft.; P.B. 2,200 ft.; old T.D. 2,605 ft.; fsg. for lnr. 2,200 ft.; tstd. S.W.; W.O.
T. D. Sedberry No. 1 Stiles, sec. 22-21-16. Set 5½-in. csg. 1,015 ft.; S.W.; D. &A. 1,049 ft.
Triple M Oil Co. No. 1 Boisseau, sec. 34-21-16. S.D.; W.O. 1,925 ft.
Nat Weisman No. 2 Stiles, NW NW sec. 27-21-16. Set 6-in. csg. 1,030 ft.; comp.; pmp. 50 B.O. and 10 B. S.W. daily; T. D. 1,036 ft.

Caldwell Parish

G. W. Ziegen No. 14 La. Central, SW cor. sec. 20-14-3e. Set 10-in. 100 ft.

Claiborne Parish

Atlantic Ref. Co. No. 1 Enloe, C SE NW sec. 28-21-4. Drlg. anhy.&sh. 3,794 ft.
Harry Fotiades No. 1 King, sec. 11-20-5. Sat. L. 5,283-97 ft.; set 5½-in. csg. 5,270 ft.; T.D. 5,302 ft.; comp.; 24 B.P. H.; 17/64-in. ck.; T.P. 340 lbs.; C.P. 0 lbs.; acdzd. with 3,000 gal.
Harry Fotiades No. 1 Rogers, C NW NW sec. 13-20-5. Set 10¾-in. csg. 773 ft.
Harry Fotiades No. 2 Whitman, C NW NW sec. 2-20-5. R.U.
Gulf Oil Corp. No. 1 Patton, NW cor. sec. 12-20-5. Set 5½-in. csg. with 20 ft. perf. on bttm. at 5,311 ft.
J. H. Henry et al No. 1 Tippett, sec. 33-21-4. Drlg. L.&sh. 4,953 ft.
Hollifield & McFarland No. 1 Kilgore, C SE NE sec. 12-20-5. Sat. L. 5,376-82 ft. and 5,385-88 ft.; set 5½-in. csg. 5,375 ft.; T.D. 5,395 ft.; comp.; 47 B.P. H.; 1-in. ck.; T.P. 100 lbs.
Lyons & Neely No. 1 Lowery, sec. 11-20-5. Comp.; 14 B.P.H.; 22/64-in. ck.; T.P. 25 lbs.; C.P. 200 lbs.; set 5½-in. csg. 5,282 ft.; T.D. 5,309 ft.
Magnolia Pet. Co. No. 2 Fowler, sec. 32-21-4. Sat. L. 5,193-96 ft. and 5,204-06 ft.; set 7-in. csg. 5,192 ft.; tstg. 5,218 ft.; treated with 3,000 gal. acd.
Oakes et al No. 1 Kilgore, NE cor. SE sec. 28-21-15. D.S.T. 4,188-4,225 ft.; tstd. dry in 5 min.; set 5¾-in. csg. 5,290 ft.; T.D. 5,313 ft.; set perf. lnr.; tstd. dry; washed with oil and acdz. with 2,000 gal. and 150 bbls. oil; swb. dry; think csg. seat gave away; recmt. csg.; cor. depth 5,270 ft.; cor. T.D. 5,357 ft.; tried to reacdz.; swbg. acd. wtr.; small S.O.
A. O. Olson No. 1 Kennedy, sec. 26-21-5. Drlg. anhy. 4,150 ft.
Prairie O. & G. Co. No. 1 Lloyd, sec. 10-20-5. Drlg. L.&sh. 4,808 ft.
Sklar Oil Corp. No. 3 Kilgore, C SW SW sec. 11-20-5. Drlg. L. 3,502 ft.
Sklar Oil Corp. No. 4 Kilgore, C SE SW sec. 11-20-5. Drlg. L. 5,290 ft.
Sloan & Zook No. 2 Patton, T.F., sec. 1-20-5. Sat. L. 5,308-11 ft., 5,312-13 ft. and 5,316-27 ft.; set 5½-in. csg. 5,365 ft.; T.D. 5,367 ft.; perf. 5,308-27 ft.; tstg.
Sloan & Zook No. 8 Patton, C SE SW sec. 1-20-5. Set 10¾-in. csg. 800 ft.
Union Prod. Co. No. 1-A Simms Unit, 660 ft. SW cor. sec. 29-20-5. Set 13⅜-in. csg. 675 ft.

Concordia Parish

Morrison & Co. No. 1 Winston, sec. 43-7-9e. Drlg. sh. 3,110 ft.

De Soto Parish

S. S. Alexander No. 1 Stoll, NE cor. sec. 5-12-16. O.W.W.O.; old T.D. 6,002 ft.; set short string 5½-in. csg. 5,479 ft. reperf. 5,420-40 ft.; tstg. S.W. 5,440 ft. cmtd. all perf. above 5,180 ft.; drld out cmt. and perf. 5,420-44 ft.; set 2-in. tbg. with pkr. 5,360 ft.; T.D. 5,453 ft.; used 5,000 gal. acd. and tstd. S.W. perf. 5,080-5,132 ft.; set pkr. 5,117 ft.; swbd. S.W.; S.O.; P.B. 4,110 ft.; arng. reperf.; T.D. 4,110 ft.; old T.D. 5,453 ft.
Coleman et al No. 1 Franklin, NW cor. NE SE sec. 29-12-11. D.S.T. 2,700-12 ft.; tstd. est. 1,000,000 ft. gas; S.D.; W.O. 2,818 ft.
G. H. Collins et al No. 2 Joiner, sec. 28-11-12. Drlg. sh. 1,600 ft.
Petroleum Heat & Power Co. No. 2 Kavanaugh, NE cor. NW SW sec. 7-11-11. Tstd. dry 2,874 ft.; W.O.
Pet. Heat & Power Co. No. 1 Rives, sec. 20-12-11. Drlg. L. 3,517 ft.
Rodessa O. & R. Co. No. 1 Boone, 330 ft. S and W, C sec. 25-11-11. Drlg. 200 ft.

Grant Parish

C. R. Bowers No. 1 Harrison Est., sec. 21-8-5. Drlg. sdy. L. 640 ft.
C. L. Thompson No. 1 McNeely Est., NE cor. sec. 10-6-3w. Ran Schlumberger; T.D sh. 4,514 ft.; S.D.

La Salle Parish

E. R. Waller No. 7 Tremont, SW NW sec. 30-20-5. Set 6-in. csg. 1,524 ft.; T. D. 1,529 ft.; W.O.S.R.

Lincoln Parish

Harry Fotiades No. 1 Patton, C SE NW sec. 7-20-4. Sat. L. 5,370-74 ft. and 5,379-83 ft.; rng. csg.; T.D. 5,390 ft.
Magnolia Pet. Co. No. 1 Fuller, C SE SW sec. 5-20-4. Set 10-in. csg. 815 ft.
Magnolia Pet. Co. No. 3 Patton hrs., C NW NW sec. 7-20-4. Set 10¾-in. csg. 784 ft.

Madison Parish

Continental Oil Co. No. 1 Singer Mfg. Co., C NE NW sec. 3-15-11e. Drlg. sh. 1,152 ft.

Natchitoches Parish

Roy Raines et al No. 1 Prudential Life Ins. Co., sec. 22-10-9w. Set 12-in. csg. 70 ft.; T.D. 1,250 ft.; S.D.

Red River Parish

Monte Oil Co. No. 1 McClelland, NW NW sec. 24-13-11. D.S.T. 967-74 ft. S.G.; D.S.T. 1,570-98 ft.; small S.G.; set 6-

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Sabine Parish

Hare et al No. 1 Stoby, SW cor. SE sec. 10-8-12. R.U. and S.D.

Hunter Co. No. 4 Bowman Hicks, sec. 13-7-13. Set 6-in. csg. 2,255 ft.; pmpd. est. 100 bbls. oil, 30% S.W.; will acdz.; T.D. 2,462 ft.

Hunter Co. No. 5 Bowman Hicks, C SE SE sec. 12-7-13. Drlg. sh. 1,800 ft.

F. B. King No. 1 Sabine Lbr. Co., sec 19-7-13. S.G. 3,595-3,617 ft.; D.S.T. 3,-563-3,628 ft.; tstd. S.G. and S.W.; drlg. sh.&L. 3,810 ft.

W. L. McClanahan No. 1 Frost Lbr. Co., sec. 22-9-13. D.S.T. 2,927-3,028 ft.; tstd. est. 1,000,000 ft. gas and 9 jts. mud; ¼-in. ck.; drlg. L. 4,510 ft.

Major Oil Co. No. 2 Bowman-Hicks, C NE SE sec. 11-7-13. Flwd. 540 bbls. in 18 hrs. with D.S. in hole; killed and pulling D.S.; 7-in. csg. at 2,144 ft.; T. D. 2,165 ft.

Harry N. Morris No. 1-B Irving & Bishop, C SW NW sec. 18-7-12. Drlg. sh. 1,400 ft.

Plymouth Oil Corp. No. 1 Kezerle, sec. 3-7-13. Tstd. S.W. 2,494 ft.; S.W. and abd.

Albert Reich No. 1 Glaque, 330 ft. NE cor. SE NE sec. 27-7-14. Drlg. L. 3,-700 ft.

Sklar & Sugar No. 1 Procella, NW NE sec. 18-7-12. Set 7-in. csg. 2,478 ft.; drlg. ch. rk. 2,664 ft.

Smiddy & Watson No. 1 Sabine Lbr. Co., NW NE sec. 12-7-13. Set 10-in. csg. 60 ft.; 7-in. csg. 2,129 ft.; W.O.C.

H. M. Sneed No. 1 Leone, 330 ft. S line, 400 ft. W line, NW SE sec. 8-7-13. R.U.

Voline Oil Co. No. 1 First Natl. Bnk., sec. 18-7-12. R.U.

Lee Whitehurst No. 1 Bowman-Hicks Lbr. Co., C W½ SE SE sec. 14-7-14 Set 9⅝-in. csg. 2,125 ft.; comp.; 50 bbls. oil, 500 bbls. S.W.; T.D. 2,410 ft.

Union Parish

Standard Oil Co. of La. No. 1 Frost Lbr., sec. 14-21-1e. Cd. 9,805-21 ft.; light gr. sd.; slight porosity in spots, salty taste; drlg. hd. sdy. sh. 9,886 ft.

Webster Parish

S. W. L. Backus No. 4 Pardee, sec. 3-22-11. D.S.T. 2,725-34 ft.; rec. 4 jts. oil and mud; T.D. 2,734 ft.; set 7-in. csg. 2,729 ft.; W.O.S.R.; O.I.H.

Fohs Oil Co. No. 1 Crichton, sec. 33-21-10. Top lower Mar. 7,980 ft.; Bodcaw sd. 8,482-8,533 ft.; rng. 7-in. csg.; T.D. sdy. sh. 8,598 ft.; perf. csg. 8,491-8,-518 ft.; comp.; 225 bbls. dist. and 1,-000,000 ft. gas on ¼-in. ck.; T.P. 265 lbs.; C.P. 2,625 lbs.

Hunt Oil Co. No. 8 Babb, sec. 13-21-10. Top Holloway sd. 5,642 ft.; set 9⅝-in. csg. 5,627 ft.; T.D. 5,980 ft.

Hunt Oil Co. No. 1 Bodcaw, C SW NE sec. 33-21-10. Drlg. sdy. sh. 5,930 ft.

Hunt Oil Co. No. 2 Bodcaw, C NE SE sec. 33-21-10. Drlg. L.&sh. 5,541 ft.

Hunt Oil Co. No. 1 Davis, 660 ft. NE cor. sec. 23-21-10. Drlg. sdy. sh. 5,760 ft.

Hunt Oil Co. No. 20 Hope. C NE NW sec. 24-21-10. Top Holloway sd. 5,596-5,604 ft.; set 9⅝-in. csg. 5,580 ft.; T.D. 5,981 ft.

Hunt Oil Co. No. 1 Pardee, sec. 24-21-10. R.U.

Hunt Oil Co. No. 4 Webb, sec. 13-20-10. Drlg. sdy. sh. 5,715 ft.

Magnolia Pet. Co. No. 1 Crichton Unit, sec. 33-21-10. Drlg. hd. sh. 7,677 ft.

Magnolia Pet. Co. No. 1-C Pardee, C NW NE sec. 17-23-11. Drlg. sh.&shlls. 1,-530 ft.

Magnolia Pet. Co. No. 1 Robbins Unit, sec. 21-21-10. Drlg. sh. 8,098 ft.

Midstates Oil Corp. No. 1 Weiorl Lbr. Co., C NW NW sec. 3-20-10. Top Tr. Pk. 6,029 ft.; no Holloway sd.; set 9⅝-in. csg. 6,121 ft.; top lower Marine 8,072 ft.; Top Bodcaw (cuttings) 8,597 ft.; set 7-in. csg. 8,656 ft.; T.D. 8,687 ft.; P.B. 8,655 ft.; to test "D" sd.; cd. "D" sd. 8,502-28½ ft.; perf. 8,502-33 ft.

Harry Morgan No. 2 Hope, C SE SW sec. 24-21-10. Drlg. L.&sh. 3,970 ft.

North American Oil Consol. Co. No. 1 Barrow, C NE NW sec. 21-21-10. Drlg. L.&sh. 4,420 ft.

Ohio Oil Co. No. 4 Bodcaw, Acct. 4, sec. 13-21-10. Drlg. L.&sh. 4,500 ft.

Ohio Oil Co. No. 4 Cox, Acct. 2. C SW sec. 15-21-10. Drlg. hd. sd. 7,178 ft.

Ohio Oil Co. No. 1 A. H. Gray, Acct. 3 sec. 26-21-10. Bodcaw sd. 8,043-8,101 ft.; set 7-in. csg.; T.D. 8,103 ft.; comp.; 324 B.P.D. dist. and 5,000,000 ft. gas; ¼-in. ck.; C.P. 2,800 lbs.; T.P. 2,750 lbs.; set 7-in. csg. 8,055 ft.

Ohio Oil Co. and Union Prod. Co. No. 1 Tillman-Gleason, sec. 28-21-10. S.D. rep. rig, 7,800 ft.

A. G. Oliphant No. 2 Hodges, C NW SE sec. 34-21-10. 9⅝-in. csg. 5,689 ft.; top lower Marine 7,667 ft.; Bod. sd. 8,139-89 ft.; set 7-in. csg. 8,120 ft.; T. D. 8,205 ft.; comp.; 512 B.P.D. dist. and est. 3,000,000 ft. gas; ⅜-in. ck.; T.P. 2,550 lbs.; C.P. 2,750 lbs.

Stanolind O. & G. Co. No. 1 Pardee Co., SW NE sec. 36-21-10. "D" stringer 8,473-98 ft.; Bodcaw sd. 8,565 ft.; cg. shly. sd. 8,606 ft.; set 5½-in. csg. 8,-607 ft.; T.D. 8,642 ft.; on 45-min. test flwd. 98 bbls. oil with gas at est. rate of 750,000 ft. per day through 2-in. flow line from csg.; C.P. 450 lbs.; T.P. 480 lbs.; flwd. 118 bbls. in 3 hrs. on ¼-in. ck. through csg.; C.P. 890 lbs.; T.P. 0 lbs.; tbg. pigd.; rerun tbg.; comp.

Union Prod. Co. No. 1 Josey, sec. 27-21-10. Drlg. hd. sd. 7,737 ft.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co. No. 2 J. A. Brookshire, sec. 66-12s-3e. Drk.

Continental Oil Co. No. 1 Franciol, sec. 67-12s-3e. R.U.

Anse La Butte—St. Martin Parish

Butte Oil Co. No. 2 Billeaud, sec. 117-9s-5e. Cg. sh. 1,235 ft.

Louisiana-Crusader No. 3 Central Oil Co., sec. 86-9s-5e. S.D. 421 ft.

Mary G. Thomas No. 1 J. A. Broussard, sec. 117-9s-5e. S.D. 1,005 ft.

Bancroft—Beauregard Parish

Republic Prod. Co. No. 1 Columbia Ld. & Tmbr. Co., sec. 16-6s-13w. R.U.

Bateman Lake—St. Mary Parish

Texas Co. No. 1 Wax Bayou, sec. 21-16s-12e. T.D. 2,309 ft.; 13⅜-in. csg. 1,885 ft.; S.D. 2,307 ft.; R.U. new rig.

Baton Rouge—East Baton Rouge Parish

Wm. Helis No. 2 Duplantier, sec. 65-7s-1w. Cd. sh.&hd. sd.; showed oil 6,454-65 ft.; T.D. 7,340 ft.; P.B. 3,800 ft.; W.O.C.

Wm. Helis No. 1 Harry Nelson, sec. 36-7s-1w. Cd. oil sd. 6,477-6,500 ft.; drlg. L. 7,336 ft.

Bay St. Elaine—Terrebonne Parish

F. L. LeBlanc No. 2 Wurzlow, sec. 17-22s-18e. S.D. 816 ft.

Bayou Blue—Iberville Parish

Humble O. & R. Co. No. 7 A. Wilberts, sec. 66-9s-11e. 16-in. csg. 208 ft.; W. O.C.

Bayou Choctaw—West Baton Rouge

La. Crusader Oil Co. No. 3 Schwing, sec. 29-8s-11e. R.U.

Standard Oil Co. et al No. 1 Marley Cypress Co., sec. 29-8s-11e. R.U.

Bayou De Allemands—St. Charles Parish

Amerada Pet. Corp. No. 1 Gheens Realty Co., sec. 56-15s-20e. T.D. 7,010 ft.; T.D. of sdtrkd. hole 5,421 ft.; sdtrkd.; drlg. sh. 6,124 ft.

Amerada Pet. Corp. No. 4 State, sec. 13-15s-20e. 13⅜-in. csg. 1,976 ft.; 9⅝-in. csg. 8,156 ft.; drlg. sh. 9,066 ft.

Amerada Pet. Corp. No. 2 St. Charles Ld. Co., sec. 13-15s-20e. 13⅜-in. csg. 2,123 ft.; cg. sdy. sh. 6,951 ft.

Caillou Island—Terrebonne Parish

Texas Co. No. 29 State, sec. 17-23s-20e. Loc.

Cameron Meadows—Cameron

Burton-Sutton Oil Co. No. 23 School Ld., sec. 16-14s-13w. T.D. 5,786 ft.; 7-in. csg. 5,323 ft.; tstd. S.W.; P.B. to sidetrack; T.D. 2,959 ft.; flwd. oil and went dead; sanded up; S.D.

Burton-Sutton Oil Co. No. 24 School Ld., sec. 16-14s-13w. Drlg. L. 5,231 ft.

Burton-Sutton Oil Co. No. 25 School Ld., sec. 16-14s-13w. Drlg. sd. 6,736 ft.

Magnolia Pet. Co. No. 22 Cameron Meadows, sec. 21-14s-13w. T.D. 4,242 ft.; 9⅝-in. csg. 4,242 ft.; perf. csg. 4,221-30 ft.; flwg. P.L. oil; went dead; P.B. 4,232 ft.; drld. out to T.D. 4,321 perf. csg. 4,300-12 ft.; drlg. sh. 5,218 ft.

Cheneyville—Rapides Parish

Amerada Pet. Corp. No. 5 Weil Ld. Co., sec. 53-1s-2e. T.D. 6,568 ft.; P.B. 6,501 ft.; W.O.C.

Texas Co. No. 3 Weil Ld. Co., sec. 53-1s-2e. Cg. sd. 8,396 ft.

Charenton—St. Mary Parish

Pan American Prod. Co. No. 9 Laws Realty Co., sec. 31-13s-10e. Drlg. sh. 560 ft.

Pan American Prod. Co. No. 4 Robichaux, sec. 11-13s-9e. T.D. 1,899 ft.; make D.S.T.; showed S.W.; P.B. 1,138 ft.; 7-in. csg. 1,120 ft.

Creole—Cameron Parish

Superior Oil Co.-Pure Oil Co. No. 2 State. Gulf of Mexico. T.D. 6,813 ft.; stk. D. S.; P.B. 1,200 ft.; W.O.C.

Darrow—Ascension Parish

Darrow Oil Co. No. 1 Dennis, sec. 68-10s-2e. T.D. 2,150 ft.; S.D.

Humble O. & R. Co. No. 3 Landry, sec. 34-10s-2e. Drlg. sh. 5,205 ft.

Kiva Oil Co. No. 1 Dupiessis, sec. 69-10s-2w. S.D. 2,523 ft.

D. J. Simmons No. 1 August Berteau, sec. 55-10s-2e. R.U.

Dog Lake—Terrebonne Parish

Texas Co. No. 6 Dog Lake, sec. 5-22s-16e. Drlg. sdy. sh.&L. 6,392 ft.

Four Isle—Terrebonne Parish

Texas Co. No. 10 State, sec. 24-21s-16e. Drlg. sh. 2,412 ft.

Gibson—Terrebonne Parish

Shell Pet. Corp. No. 1 Kuntz, sec. 40-17s-15e. Drlg. sh. 5,739 ft.

Shell Pet. Corp. No. 6 Pellican, sec. 20-17s-15e. T.D. 9,505 ft.; 7-in. csg. 9,485 ft.

Garden Island—Plaquemines Parish

Texas Co. No. 29 State, sec. 38-23s-33e. Top salt 6,983 ft.; T.D. 6,993 ft.; run 7-in. csg.

Hackberry—Cameron Parish

W. T. Burton No. 1 F. Lacy, sec. 22-12s-10w. T.D. 3,683 ft.; 7-in. csg. 3,462 ft. perf. csg. 3,403-57 ft.; I.P. 155 B.P.D.; ⅛-in. ck.

Darryl Davis No. 1 Bickford, sec. 39-12s-10w. Drlg. sh. 2,448 ft.

Gulf Oil Corp. No. 1 Noble, sec. 22-12s-10w. T.D. 3,201 ft.; stk. D.S.

John Merrick No. 2 Vincent, sec. 28-12s-10w. T.D. 3,148 ft.; 5-in. csg. 3,-131 ft.

Superior Oil Co. No. 2 Benson, sec. 30-12s-10w. T.D. 6,525 ft.; I.P. 469 B.P. D.; 11/64-in. ck.

Texas Co. No. 24-B State, sec. 12s-9w. T.D. 8,052 ft.; blew out; stk. D.S.; hole cleaned out to 7,659 ft.; P.B. 6,-578 ft.; T.D. 6,686 ft.; P.B. to 6,480 ft.; sdtrkd.; drld. to 6,670 ft.; P.B. to 5,900 ft.; drlg. sh. 6,510 ft.

Horseshoe Bayou—St. Mary Parish

Texas Co. No. 2 State, sec. 37-17s-9e. R.U.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 1-A Roane Sugar Co., sec. 38-13s-9e. T.D. 10,404 ft.; top brkn. sec. oil show 10,303 ft.; 7-in. csg. 10,404 ft.; T.D. 10,603 ft.; sdtrkd. at 10,410 ft.; drlg. 10,535 ft.

Jefferson Island—Iberia Parish

Texas Co. No. 1 State-Lake Pelgneur, Twp. 12s-5e. R.U.

Jennings—Acadia Parish

W. T. Burton No. 6 Roboria, sec. 41-9s-2w. T.D. 6,797 ft.; 7-in. csg. 6,721 ft.

Frio Oil Co. No. 1 Iowa-Jennings, sec. 45-9s-2w. T.D. 6,687 ft.; stk. D.S.; P.B. to sdtrk. at 4,635 ft.; stk. D.S. 2,731 ft.; fsg.

Glassell & Glassell No. 5 Trushell, sec. 42-9s-2w. Drlg. sh.&sd. 3,690 ft.

W. S. Noble et al No. 1 Ed Prather, sec. 45-9s-2w. S.D. 3,873 ft.

Pet. Heat & Power Co. No. 1 Donnley, sec. 45-9s-2w. R.U.

Pet. Heat & Power Co. No. 1 Iowa-Jennings, sec. 45-9s-2w. T.D. 3,770 ft.; P. B. 1,055 ft.; to sdtrk.; cd. oil sd. 1,760 ft.; R.U. to pump.

Pet. Heat & Power Co. No. 2 Iowa-Jennings, sec. 45-9s-2w. T.D. 2,167 ft.; P. B. 1,595 ft.; 5½-in. csg. 1,585 ft.

Pet. Heat & Power Co. No. 1 Smith, sec. 45-9s-2w. S.D. 3,873 ft.

Stanolind O. & G. Co. No. 112 Crowley Oil & Mineral Co., sec. 48-9s-2w. 10¾-in. csg. 1,395 ft.; drlg. sd.&L. 6,235 ft.

Superior Oil Co. No. 4 Iowa-Jennings, sec. 41-9s-2w. Drlg. sh. 6,473 ft.

Superior Oil Co. No. 4 Clement, sec. 46-9s-2w. Drlg. sh. 1,083 ft.

Superior Oil Co. No. 7 Jennings-Heywood, sec. 41-9s-2w. Drk.

Superior Oil Co. No. 13 Leckelt, sec. 42-9s-2w. T.D. 7,926 ft.; sdtrkd.; drlg. sh. 5,820 ft.

Superior Oil Co. No. 14 Leckelt, sec. 42-9s-2w. T.D. 7,470 ft.; 7-in. csg. 7,470 ft.; cg. hd. sd. 8,417 ft.

Three Sands Oil Co. No. 1 Whisenhunt & Tyrell, sec. 46-9s-2w. R.U.

Victor Weisse No. 1 Clement, sec. 46-9s-2w. 6⅝-in. csg. 3,032 ft.; T.D. 3,255 ft.; fsg. for tbg.

Lafitte—Jefferson Parish

Carter-Perrin & Brian No. 1 Lucien, Adams, sec. 9-17s-24e. Drk.

Texas Co. No. 11 Lafitte, sec. 19-17s-24e. Drlg. sh. 8,024 ft.

Texas Co. No. 3 Madison Realty Co., sec. 17-12s-24e. Drlg. sh. 1,500 ft.

Texas Co. No. 3 Marrero Ld. Co., sec. 29-17s-24e. T.D. 6,221 ft.; D.S. stk.

Texas Co. No. 10 Rigolet Cooperative Fur Co., sec. 28-17s-24e. Dredge canal.

Lake Barre—Terrebonne Parish

Texas Co. No. 16 State, sec. 32-21s-19e. T.D. 4,280 ft.; P.B. 2,734 ft.; drlg. anhy. 3,246 ft.

Texas Co. No. 42 State-Lake, sec. 40-21s-19e. 9⅝-in. csg. 6,678 ft.; drlg. sh. 7,-947 ft.

Lake Hermitage—Plaquemines Parish

Gulf Ref. Co. No. 8 Lafourche, sec. 11-18s-25e. R.U.

Lake Pelto—Terrebonne Parish

Texas Co. No. 19 State-Lake Pelto, sec. 17-23s-18e. T.D. 6,315 ft.; stk. D.S.; sdtrkd.; T.D. 7,004 ft.; P.B.

Leesville—Lafourche Parish

Wm. Helis No. 1-A City of New Orleans, sec. 35-21s-22e. S.D. 5,526 ft.

Texas Co. No. 69 Leeville, sec. 27-21s-22e. Drlg. sdy. sh. 5,001 ft.

Lirette—Terrebonne Parish

Humble O. & R. Co. No. 1 Wurzlow, sec. 32-19s-19e. Top sd. S.G. 8,423 ft.; T.D. 8,566 ft.; 9⅝-in. csg. 8,521 ft.; found split csg. 7,063-73 ft.; found cmt. inside of D.S.; washing over stuck D.S. prep. to sdtrk.; sdtrkd. 7,935 ft.; top oil sd. 8,424 ft.; T.D. 8,435 ft.; run csg.

Lockport—Calcasieu Parish

Continental Oil Co. No. 1 J. H. Moss, sec. 8-10s-9w. 10¾-in. csg. 986 ft.; T.D. 6,737 ft.; S.W. sd.; P.B. 5,340 ft.; perf. 5,314-24 ft.; I.P. 139 B.P.D.; ⅛-in. ck.

Lake Long—Lafourche Parish

Fohs Oil Co. No. 5 State-Lake Long, sec. 64-17s-19e. Drk.

New Iberia—Iberia Parish

Canal Oil Co. No. 10 Bernard, sec. 54-12s-7e. T.D. 4,256 ft.; P.B. 1,500 ft.

Canal Oil Co. No. 4 Sabatier, sec. 54-12s-7e. T.D. 2,560 ft.; P.B. 1,410 ft.

H. Foteades No. 7 Gulf Ld., sec. 25-12s-7e. Drk.

Wm. Helis No. 5 Bolivar, sec. 56-12s-7. T.D. 4,337 ft.; salt; P.B. and sdtrkd.; T.D. 3,594 ft.; 7-in. csg. 3,100 ft.; made sqz. job 3,070-80 ft.; P.B.; drlg. out to 3,145 ft.; swbd. dry; pig. scrn.; P.B. 3,170 ft.; W.O.S.R.

Wm. Helis No. 7 Bullock and Burke, sec. 25-12s-7e. Drlg. sh.&L. 5,745 ft.; no report.

Texas Co. No. 2 Burke, sec. 56-12s-7e. T.D. 7,076 ft., salt; P.B. 4,350 ft.

Texas Co. No. 7 Duke, sec. 26-12s-7e. T.D. 5,911 ft.; 7-in. csg. 5,874 ft.

Texas Co. No. 2 Schwing, sec. 71-12s-7e. Drk.

Texas Co. No. 4 Grelino, sec. 25-12s-7e. 10¾-in. csg. 779 ft.; drlg. sh. 4,894 ft.

North Crowley—Acadia Parish

Humble O. & R. Co. No. 3 Federal Ld. Bnk., sec. 34-8s-1e. T.D. 9,143 ft.; P.B. 7,370 ft.; to test 7,194-7,210 ft.; 7-in. csg. 7,359 ft.; perf. csg. 7,192-98 ft.; lost swb. in hole; fsg.

Port Barre—St. Landry Parish

Emerson Oil Co. No. 5 Sibille Oil Co., sec. 20-6s-5e. T.D. 3,475 ft; 5-in. csg. 3,470 ft.; tstd. S.W.; P.B. and sdtrkd.; redrld.; T.D. 3,417 ft.; run csg.

T. C. Markley No. 1 Lahaye, sec. 4-6s-5e. T.D. 4,775 ft.; 7-in. csg. 4,608 ft.; tstd. S.W.; sdtrkd.; drlg. sh. 2,160 ft.

Pan American Prod. Co. No. 1 Lahaye, sec. 4-6s-5e. T.D. 5,426 ft., salt; top salt 5,422 ft.; P.B. to 3,900 ft.; drlg. sdy. sh.&L. 4,652 ft.

Y. D. Spill No. 1 Gaudet, sec. 4-6s-5e. drlg. sh. 1,365 ft.

Texas Co. No. 22 Botney Bay Lbr. Co., sec. 4-6s-5e. T.D. 3,569 ft.; P.B. 3,434 ft.; set csg. 3,434 ft.; P.B. 3,249 ft.; pmpg. S.W. and some oil.

Potash—Plaquemines Parish

Humble O. & R. Co. No. 36 Orleans Lve. Bd., sec. 14-18s-15e. Drlg. sd. 8,-055 ft.

Quarantine Bay—Plaquemines Parish

Gulf Oil Corp. No. 1-A Orleans Levee Bd., sec. 18-19s-17e. Drlg. sh. 278 ft.

Gulf Ref. Co. No. 4 State, sec. 17-19s-17e. T.D. 5,700 ft.; 9⅝-in. csg. 5,560 ft.; oil sd. 9,228-29 ft., 9,234-36 ft. and 9,-617-18 ft.; oil and gas shows 9,617-94 ft.; top sd. oil show 10,079 ft.; T.D. 10,950 ft.; 5-in. csg. 10,928 ft.; sdy. sh. S.O.; cd. 10,737-10,823 ft.; 5-in. csg. 10,-928 ft.

Gulf Ref. Co. No. 5 State, sec. 17-19s-17e. Loc.

Gulf Ref. Co. No. 6 State, sec. 17-19s-17e. Driving piling.

Raceland—Lafourche Parish

Amerada Pet. Corp. No. 1 Godchaux Sugars, Inc., sec. 34-15s-19e. 18⅝-in. csg. 262 ft.; T.D. 10,703 ft.; S.D. 11,-315 ft.

Amerada Pet. Corp. No. 2 South Coast Corp., sec. 35-15s-19e. 11¾-in. csg. 2,-666 ft.; drlg. sh. 10,779 ft.

Tide Water Asso. Oil Co. No. 1 South Coast Corp., sec. 33-15s-19e. R.U. and S.D.

Sorrento—Ascension Parish

Pan American Prod. Co. No. 11 United Ld. Co., sec. 15-10s-4e. 10¾-in. csg. 308 ft.; T.D. 1,667 ft.; 7-in. csg. 1,-248 ft.; I.P. 500,000 ft. gas; ¼-in. ck.

Pan American Prod. Co. No. 12 United Ld. Co., sec. 15-10s-4e. R.U.

Sorrento Pet. Corp. No. 2 White, sec. 22-10s-4e. R.U.

South Elton—Jeff Davis Parish

Stanolind O. & G. Co. No. 4-B Calcasieu Natl. Bnk., sec. 29-7s-3w. M.I.M.

South Roanoke—Jeff Davis Parish

Continental Oil Co. No. 1 Joe Sturdivant, sec. 36-10s-4w. T.D. 9,825 ft.; 8⅝-in. csg. 9,825 ft.

Union Sulphur Co. No. 2 T. R. S. Farms, sec. 23-10s-4w. Drlg. sdy. sh. 9,405 ft.

Starks—Calcasieu Parish

Lutcher-Moore Co. No. 5 fee. sec. 19-9s-12w. T.D. 4,153 ft., salt; P.B. 3,987 ft.; P.B. 3,845 ft.; 7-in. csg. 3,827 ft.; swbd. oil and S.W.; S.D.

J. R. Turnbull No. 1 Industrial Lbr. Co., sec. 19-9s-12w. Top salt 2,270 ft.; S.D.: 2,273 ft.; P.B. 1,150 ft.; trying to sdtrk.

Timbalier Bay—Lafourche Parish

Gulf Oil Corp. No. 4 State, sec. 36-23-21e. T.D. 7,373 ft.; twisted off drill collar; sdtrkd. jnk.; cd. sd. 5,332-36 ft.; tstd. 3 stands drlg. mud. oil and sd.; cd. oil sd. 5,336-43 ft.; T.D. 7,159 ft.; P.B. 6,500 ft.; sdtrkd.; drlg. sh. 6,144 ft.

Valentine—Lafourche Parish

Wm. Helis No. 2 Valentine Sugar, sec 3-17s-20e. Cd. oil sd. 7,464-7,500 ft.; T. D. 7,582 ft.; 7-in. csg. 7,454 ft.; I.P. 54 bbls. P.L.O. per hr.; ¼-in. ck.; T.P. 2,250 lbs.; C.P. 2,150 lbs.; grav. 37.

Pan American Prod. Co. No. 1-A Community, sec. 99-17s-20e. Drlg. sh. 2,-044 ft.

Pan American Prod. Co. No. 2-B Community, sec. 58-17s-20e. T.D. 9,328 ft.; D.S. stk.

Pan American Prod. Co. No. 1 A. Robichaux, sec. 3-17s-20e. Drlg. sd.&clay 235 ft.

Venice—Plaquemines Parish

Tide Water Oil Co. No. 8 Manhattan Ld. & Fruit Co., sec. 26-21s-30e. 24-in. csg. 91 ft.; cd. sd., oil odor, 5,998 ft. drlg. sd.&L. 6,652 ft.

Villa Platte—Evangeline Parish

Continental Oil Co. No. 1 A. M. Fontenot, sec. 46-3s-2e. R.U.

Continental Oil Co. No. 1 Oscar Pitre, sec. 44-3s-2e. Cd. oil sd. 8,992-9,053 ft.; T.D. 9,054 ft.; run csg.

Continental Oil Co. No. 1 Opelousas, St. Landry, sec. 44-3s-2e. Drlg. sh. 8,188 ft.
Continental Oil Co. No. 1 Tate & Mc Daniel, sec. 44-3s-2e. Drlg. sh. 8,415 ft.
Continental Oil Co. No. 1 T. E. Vidrine, sec. 47-3s-2e. Drlg. sh.; T.D. 10,506 ft.; cmtd. bttm. of hole with cmt.; P.B. 9,014 ft.; perf. csg. 8,975-84 ft.; tstd. S.W.; S.D.
Continental Oil Co. No. 1 J. E. Vidrine, sec. 46-3s-2e. Cd. oil sd. 9,080 ft.; T.D. 9,110 ft.; I.P. 472 B.P.D.; ¼-in. ck.

Vinton—Calcasieu Parish

J. B. Reddich No. 3 Vincent, sec. 34-10s-12w. Loc.

Welsh—Jeff Davis Parish

A. V. Peters No. 3 fee, sec. 22-9s-5w. T.D. 1,020 ft.; 6⅝-in. csg. 950 ft.; stk. baller; S.D.
Stanolind O. & G. Co. No. 2 Conover, sec. 20-9s-5w. T.D. 7,353 ft.; well tried to blow out; P.B. 3,590 ft.; to sdtrk.; drlg. sd.&L. 5,510 ft.
Stanolind O. & G. Co. No. 1 Pousson, sec. 28-9s-5w. Drk.

Woodlawn—Jeff Davis Parish

Union Sulphur Co. No. 3 Calcasieu Natl Bnk., sec. 1-9s-6w. T.D. 9,250 ft.; fsg.

S. LOUISIANA WILDCATS

Avoyelles Parish

G. C. Koch et al No. 1 Kelone, sec. 21 2n-3e. 10¾-in. csg. 987 ft.; S.D. 6,02. ft.; prep. to resume drlg.

Calcasieu Parish

Sun Oil Co. No. 1 Lutcher-Moore Lbr Co., sec. 1-8s-13w. T.D. 9,480 ft.; abd.
Republic Prod. Co. No. 1 Sabine Tram, sec. 25-8s-14w. Old T.D. 9,620 ft.; side-tracked; drlg. sh. 8,029 ft.
Union Sulphur Co. No. 1 Drew-Manuel, sec. 4-10s-11w. Drlg. sh.&L. 7,380 ft.
Wheeler Oil Corp. No. 2 Sch. Ld., sec. 16-9s-7w. 15½-in. csg. 46 ft.; S.D. 641 ft.; T.A.

Cameron Parish

Humble O. & R. Co. No. 1 K. B. Hanzen, 466 ft. S and E. NW cor. SW¼ sec. 9-12s-6w. Run 13⅜-in. csg. 2,703 ft.; T.D. 8,695 ft.; rmg. to set 9⅝-in. csg.
Pure Oil Co. No. 1 Calcasieu Natl. Bnk., sec. 18-12s-4w. Drlg. sh.&L. 6,580 ft.
Superior Oil Co. No. 1 Sells, sec. 5-15s-8w. T.D. 6,350 ft.; 10¾-in. csg. 6,350 ft.; drlg. sh. 9,895 ft.

Iberia Parish

Texas Co. No. 2-B Vermilion Bay, sec. 20-16s-5e. T.D. 9,101 ft.; P.B. and sdtrkd. at 5,788 ft. T.D. 7,020 ft.; P.B. 6,385 ft.; to sdtrk.; T.D. 7,623 ft.; P.B. 7,-176 ft.; to sdtrk.; T.D. 7,348 ft.; 9⅝-in. csg. 7,263 ft.; T.D. 9,667 ft.; set 2,990 ft. of 5⅞-in. csg. 9,667 ft.; drld. plug to 9,667 ft.; well blew out; blowing dry gas; capped well; S.I.

Jeff Davis Parish

Union Sulphur Co. No. 1 H. J. Liggett, sec. 36-7s-5w. Drlg. sd. 3,136 ft.

Jefferson Parish

Julius Szodomka No. 1 Carroll, sec. 12-12s-11e. Drlg. sh. 4,825 ft.

Lafourche Parish

Sun Oil Co. No. 1 Dilbert Stark. Brown Cypress Co., sec. 70-15s-15e. Drlg. sh. 2,643 ft.

Texas Co. No. 1 La Terre, sec. 1-20s-21e. Drlg. sh.&sd.

Orleans Parish

W. T. Burton No. 1 R. E. E. de Montluzin, sec. 1-10s-13e. Drk.
W. T. Burton No. 1 State-Lake Pontchartrain, Twp. 10s-13e. Drlg. sh. 3,-750 ft.

Plaquemines Parish

Gulf Oil Corp. No. 1 Grand Prairie Lve. Dist., sec. 6-20s-19e. Cd. O.S. 6,048-6,151 ft.; drlg. sdy. sh. 6,151 ft.

Rapides Parish

J. J. Farrell No. 1 W. P. Aertker, sec. 16-4n-1e. Drk.
E. F. Kalb et al No. 1 Lee Lbr. Co., sec. 9-5n-3e. Drk.

St. Bernard Parish

Gulf Ref. Co. No. 3 State Lake, Twp. 12s-15e. 13⅜-in. csg. 1,558 ft.; 9⅝-in. csg. 6,486 ft.; drlg. sd. 10,278 ft.

St. James Parish

Continental Oil Co. No. 1 Colonial Sugars Co., sec. 46-12s-5e. T.D. 5,930 ft.; fsg.
Continental Oil Co. No. 1 Realty Operators, sec. 17-12s-17e. 18⅝-in. csg. 302 ft.; 13⅜-in. csg. 2,473 ft.; T.D. 6,501 ft.; T.D. 7,013 ft.; 9⅝-in. csg. 6,520 ft.; tried to blow out; stk. D.S.; fsg.; T.D. 7,499 ft.

St. John the Baptist Parish

Shell Pet. Corp. No. 1 Godchaux, sec. 97-11s-7e. Drlg. sd. 3,736 ft.

St. Martin Parish

Shell Pet. Corp. No. 1 Jeanerette Lbr. Co., sec. 14s-12e. Cg. 9,842 ft.
Texas Co. No. 6 State Lake Mongoulois, sec. 10-10s-9e. Spd.
Texas Co. No. 11 St. Martin Ld. Co., sec. 21-8s-7e. Drlg. sh.&L. 7,681 ft.

St. Tammany Parish

Ozro B. Phillips No. 1 A. J. Planche, sec. 28-6s-10e. S.D. 3,118 ft.

Terrebonne Parish

Barnsdall Oil Co. No. 1 R. R. Barrow, Inc., sec. 41-17s-18e. T.D. 7,864 ft.; rmg.
Fohs Oil Co. No. 1 Buckley & Bourg, sec. 77-19s-17e. Stk. 7-in. csg. at 11,-684 ft.; T.D. 13,333 ft.; cmtd. 1,957 ft. of 5-in. csg. at 13,301 ft.; perf. csg. 13,254-66 ft.; C.O.; I.P. 124 B.P.D.; 12/64-in. ck.; S.I.
Fohs Oil Co. No. 1 State, sec. 41-19s-19e. 18⅝-in. csg. 246 ft.; cd. sd. S.G. 6,894-9,226 ft.; T.D. 12,511 ft.; 7-in. csg. 12,-215 ft.; T.D. 13,347 ft.; stk. D.S.; P.B. 11,100 ft.; W.O.C.
Shell Pet. Corp. No. 1 Peters, sec. 73-18s-18e. Drlg. sh.&L. 8,335 ft.
Shell Pet. Corp. No. 1 Realty Operators, sec. 10-18s-16e. 13⅜-in. csg. 2,461 ft.; cg. sd. 9,414 ft.
Texas Co. No. 1 State, Callau Island Bay, Twp. 23s-14e. Loc.

Vermilion Parish

Magnolia Pet. Co. No. 1 J. B. Ferguson, sec. 5-12s-2w. 13⅜-in. csg. 3,084 ft.; T.D. 9,144 ft.; P.B. 7,150 ft.; tstd. 1,-350 lbs. W.P. 16 min. on D.S.T., 1,140-50 ft.; recvd. mud and dist.; 7-in. csg. 7,130 ft.; perf. csg. 7,140-50 ft.; I.P. 60 to 70 bbls. dist. per day; ¼-in. ck.; T.P. 2,600 lbs.; C.P. 2,650 lbs.

Vernon Parish

Mike Halbouty et al No. 1 Gulf Lbr. Co., sec. 15-1n-6w. T.D. 4,894 ft.; rmg.

ARKANSAS

Calhoun County

C. E. Murdock No. 1 Southern Kraft Corp., SE cor. NW NW sec. 17-14-13. T.D. 10 ft.; S.D.; titles.

Columbia County

Fohs Oil Co. No. 1 Phillips, C NW SW sec. 15-17-19. S.G. 3,330-50 ft.; drlg. sh.&sd. 5,428 ft.
Standard Oil Co. of La. No. 1 T. Crumpler, sec. 15-17-19. Top James L. 3,657 ft.; drlg. sdy. sh. 5,078 ft.
Standard Oil Co. of La. No. 3 McKean, NE SE sec. 7-16-22. Set 13⅜-in. csg. 209 ft.; W.O.C.
G. H. Vaughn No. 1 Garrett, C NE SE sec. 14-17-20. R.U.
O. F. Whittaker No. 1 C. C. Hall, 70 ft. W line, 52 ft. S line, NW NW sec. 11 15-20. Drlg. hd. gr. sh. 2,087 ft.

Craighead County

Tannark, Inc., No. 1 Ruby M. Martin, 580 ft. N line, 80 ft. E line, sec. 35-14n-3e. Set 10¾-in. csg. 230 ft.

Lafayette County

Standard Oil Co. of La. No. 1 J. L. Warren, 1,980 ft. E line, 610 ft. N line, sec. 18-16-22. Top anhy. 3,279 ft.; drlg. sh.&L. 4,341 ft.

Little River County

M. E. Sanderson No. 1 Pinny; O.W.W.O.; reported abd. 1,300 ft.; NE cor. NE SW sec. 6-13-30. Drlg. sd. rk. 1,324 ft.
Joe G. Straham et al No. 2 Dierks Lbr. Co. Top L. 2,425 ft.; S.D.; W.O. 3,-030 ft.

Lonoke County

J. F. Russell No. 1 Gunter, sec. 17-5n-10w. Drlg. 820 ft.

Miller County—Bodcsaw

F. W. Buford No. 2 Mitchell, 330 ft. NW cor. NE NW sec. 11-20-28. Set 5½-in. csg. 6,147 ft.; T.D. 6,180 ft.; comp.; 15 B.P.H.; ¼-in. ck.; T.P. 450 lbs.; C.P. 500 lbs.
Gerhig Co. No. 1 H. C. Mitchell, SE SW sec. 2-20-28. Set 8⅝-in. csg. 1,010 ft.; W.O.C.
Hill & Eastabrook No. 1 Sherman, SW NW sec. 29-19-28. Drlg. sh.&sd. 1,730 ft.
Red River Valley Oil Co. No. 1 Beck, sec. 34-15-26. Set 10¾-in. csg. 128 ft.; S.D. fuel 1,450 ft.
Texas Canadian Oil Corp. No. 2 Dickson, 330 ft. NE cor. SE NW sec. 11-20-28. Drlg. sh.&L. 6,092 ft.

Nevada County

Benedum & Trees Oil Co. No. 1 Blakeley & Suckle, 330 ft. SE cor. sec. 4-14-20. Top Tokin sd. 2,125 ft.; set 7-in. csg. 2,126 ft.; W.O.S.R.
B. L. Webb No. 1 Boswell, sec. 5-14-20. Set 10-in. csg. 63 ft.
Bruce E. Wallace No. 2 Haynie, SE cor. SE NE sec. 5-14-21. Sdy. sh. 1,194-1,-204 ft.; tstd. mud, S.W. and oil 1,198-1,214 ft.; 30 min.; W.O.; T.D. 1,214 ft set 6-in. csg. 1,198 ft.; swbd. est. 10 bbls. oil; W.O.S.R. 1,214 ft.

Pulaski County

Coker Oil Corp. No. 1 Stone, sec. 36-3n-11w. Set 12½-in. csg. 108 ft.
A. L. Kitselman No. 2 A. L. Kitselman, Jr., SE SE SW sec. 2-1s-13e. T.D. 2,-900 ft.; lost circ.; P.B. surf.; drlg. out cmt. 2,900 ft.

Union County—Schuler

R. T. Adams No. 1 F. W. Powledge, sec. 7-18-17. Drlg. hd. rd. sd. 6,687 ft.
Alice Sydney Oil Co. No. 4 Powledge, SW cor. NW SE sec. 7-18-17. Top Jones sd. 7,593 ft.; T.D. 7,633 ft.; rmg. down to set 7-in. csg.
Atlantic Ref. Co. No. 1 Dumas, NW cor. NE NW sec. 21-18-17. Top Jones sd. 7,602 ft.; top L. 7,679 ft.; set 7-in. csg. 7,690 ft.; T.D. 7,693 ft.; perf. 7,600-20 ft.; comp.; 970 B.P.D.; ¾-in. ck.; T.P. 525 lbs.; C.P. 1,285 lbs.
E. M. Jones No. 3-A Murphy Ld. Co., NE cor. SE NE sec. 19-18-17. Drlg. rd. sdy. sh. 7,363 ft.
E. M. Jones No. 2 Rogers, SW SW sec. 16-18-17. Drlg. 2,733 ft.
Lion Oil Ref. Co. No. 1 Clarence, SW cor Lot 7, SW sec. 7-18-17. Top Jones sd. 7,568 ft. and rmg. to bttm., 7,598 ft.
Lion Oil Ref. Co. No. 1 Dee, sec. 17-18-17. Drlg. rd.&gr. sdy. sh. 6,045 ft.
Lion Oil Ref. Co. No. 2 Marcus, 330 ft. SE cor. Lot 3, SE sec. 18-18-17. Drlg. rd.&gr. sh. 5,324 ft.
Lion Oil Ref. Co. No. 3 Marcus, SW cor. Lot 5, NW sec. 18-18-17. Drlg. 3,340 ft.
Lion Oil Ref. Co. No. 1 Marvin, NE cor. Lot 7, SW sec. 7-18-17. Top Jones sd. 7,601-56 ft.; top L. 7,707 ft.; T.D. 7,-718 ft.; 7-in. csg. 7,676 ft.
Lion Oil Ref. Co. No. 4 Mayfield, C Lot 3, NW sec. 18-18-17. Top Jones sd. 7,-542 ft.; top L. 7,642 ft.; T.D. 7,726 ft.; 7-in. csg. 7,721 ft.
Lion Oil Ref. Co. No. 5 Mayfield, sec. 18-18-17. Drlg. rd. sh. 6,641 ft.
Lion Oil Ref. Co. No. 6-B Edna Morgan, sec. 18-18-17. Top Jones sd. 7,-533 ft.; rmg. to T.D. 7,603 ft.; to core ahd.
Marine Oil Co. No. 1 Calloway, SE cor. Lot 4, NW sec. 18-18-17. Drlg. rd. sdy. sh. 6,632 ft.
Phillips Pet. Co. No. 3 Marks, C Lot 2. Top Jones sd. 7,504 ft.; top L. 7,608 ft.; set 7-in. csg. 7,784 ft.; T.D. 7,806 ft. perf. csg. 7,648-55 ft.; flwd. 181 B.P.H.; ¼-in. ck.; T.P. 1,200 lbs.; C.P. 2,-450 lbs.; at gas-oil ratio 700/1; killed; set cmt. retainer 7,640 ft. and recmtd.; perf. 7,650-55 ft. and 7,661-63 ft.; flwg. 296 bbls.; 24/64-in. ck. in 18½ hrs.; tstd. 78% S.W.; drlg. out plug to re-cmt. and S.O. S.W.
Phillips Pet. Co. No. 4 Marks, sec. 18-18-17. Drlg. rd.&gr. sh. 6,196 ft.
Phillips Pet. Co. No. 1 Miller, NE cor., Lot 4, SW sec. 18-18-17. R.U.
Phillips Pet. Co. No. 1 Sewell, SW cor., Lot 5, SW sec. 7-18-17. Drlg. 225 ft.
Roberts & Murphy No. 1 Justiss, 330 ft. SE cor. Lot 6, SW sec. 7-18-17. Set 10¾-in. csg. 1,771 ft.; drlg. sdy. sh. 7,-055 ft.

Union County—Other

J. R. Lockhart No. 1 Raulston, sec. 12-17-14. Cd. oil sd. 3,160-75 ft.; D.S.T. 3,172-75 ft.; rec. drlg. fluid and S.W.; cd. 3,175-85 ft.; S.O.; salty taste; set 7-in. csg. 3,077 ft.; arng. perf.

Joe Modisette et al No. 2 Union Sawmill Co., sec. 8-18-12. Top rd. bds. 2,-950 ft., T.D.; set 9⅝-in. csg. 3,040 ft.
Phillips Pet. Co. No. 5 Bilyew, 460 ft. N line, 660 ft. W line, sec. 9-16-15. O.W.W.O.; former Shell dry gasser; comp.; blowing 31,000,000 ft. daily; old T.D. 2,294 ft.; cd. top Meakin 2,347 ft.; T.D. 2,348 ft.; 250 ft. F.I.H.; W.O.S.R.
W. D. Wingfield, Tr. No. 2 Kidd Est., SE cor. NW SW sec. 15-18-13. Sd. S.D. 2,257-2,300 ft.; set 6-in. csg. 2,250 ft.; T.D. 2,300 ft.; W.O.S.R.

MISSISSIPPI

Calhoun County

S. & O. Properties, Inc., No. 1 G. C. Cooned, SE NE sec. 12-24n-8e. T.D. 2,-300 ft., rd. bds.; S.D.

George County

Cleve Love et al No. 2 J. J. Newman Lbr. Co., C SW sec. 9-1s-8w. Rebldg. drk. to res. op.; T.D. 1,380 ft.

Harrison County

Big Ridge Oil Co. No. 1 Hingin, sec. 13-7s-10w. S.D. 2,700 ft.

Hinds County

Cleve Love et al No. 1 S. F. Johnson, NE cor. SE¼ sec. 29-6n-1w. Set 7-in. csg. 3,355 ft.; T.D. 3,707 ft.; S.D.
Cleve Love et al No. 1 Progressive Realty Co., SE SW sec. 35-6n-4w. Drlg. hd. sh. 5,530 ft.

Lamar County

Southern Miss. Pet. Co. No. 1 Morris, SE sec. 4-2n-1w. S.D. 3,029 ft.

Rankin County

Wilmut G. & O. Co. No. 1 Pearl City Well, SW SW sec. 31-6n-26. Set 5-in. csg. 234 ft.; set 9-in. csg. 750 ft.; top blk. sh. 2,280 ft.; drlg.

Simpson County

Goodwill O. & G. Co. No. 1 Berry, sec. 33-2n-4e. Drlg. sdy. sh. 2,520 ft.
Cleve Love No. 1 N. E. Garner, SE cor. SW NE sec. 1-10n-17w. S.D. 27 ft.; financing.

Yalobusha County

Acme Holding Co. No. 1 S. D. Boyle, NW NW sec. 33-25n-7e. S.D.; W.O.D. S., 1,650 ft.

FLORIDA

Nassau County

St. Mary River Oil Corp. No. 1 Hillard Turpentine Co., sec. 19-4n-24e. Drlg. 4,500 ft.

Lake County

Union O. & R. Co. No. 1 Gulf Explr., sec. 17-24s-25e. S.D. 235 ft.

TEXAS

Week Ending July 9

GULF COAST FIELDS

Lockridge—Brazoria County

Gulf Oil Corp. No. 8-A Wilkes & Smith, J. W. Hall Sur. No. 11. Drk.
Shell Pet. Corp. No. 5-B Ramsey State farm, J. W. Hall Sur. Drk.

Hastings Field—Brazoria County

Humble O. & R. Co. No. 9 W. H. Schindler, H.T.&B. Sur. No. 30. Drlg. sh. 2,410 ft.
Humble O. & R. Co. No. 11 W. G. McDeed, H.T.&B. Sur. No. 27. Drlg. sh. &L. 2,405 ft.
Stanolind O. & G. Co. No. 9 T. C. Edwards, Wm. Henry Sur. T.D. 6,084 ft.; W.O.C.
Stanolind O. & G. Co. No. 7 Matsushita, H. Stevens Sur. 10¾-in. csg. 1,242 ft.
Stanolind O. & G. Co. No. 7-C H. Moore, R. A. Magee Sur. T.D. 6,080 ft.; W. O.C.
Stanolind O. & G. Co. No. 3-B Stockwell, A.C.H.&B. Sur. No. 2. Drk.

Old Ocean—Brazoria County

Harrison & Abercrombie No. 1 David Kaufman, C. Breen Sur. P.B. and sidetracked; T.D. 10,268 ft.; 7-in. csg. on bttm.; tstg.
Harrison & Abercrombie No. 1 R. D. McDonald, C. Breen Sur. R.U.
Harrison & Abercrombie No. 1 I. N. Trover, Chas. Breen Sur. 9⅝-in. csg. 7,010 ft.; T.D. 10,133 ft.; tstg.
Harrison & Abercrombie No. 1 C. Larsen, Chas. Breen Sur. Drk.
Harrison & Abercrombie No. 1 West Texas Abst. Co., C. Breen Sur. Drlg. sh. 9,410 ft.

West Columbia—Brazoria County

Adrian Moore No. 4 Gulf fee, G. Tennille Sur. Drlg. sh. 4,930 ft.
Frost & Dunman No. 1 Mary C. Masterson, G. Tennille Sur. Drlg. sh. 5,237 ft.
Mike Hogg No. 2 Hogg, M. Varner Sur. T.D. 5,367 ft.; abd.
Merrick Oil Co. No. 2 T. L. Smith, G. Tennille Sur. T.D. 5,350 ft.; tstg.
Texas Co. No. 24 Abrams, G. Tennille Sur. Drlg. sh.&L. 5,367 ft.
Texas Co. No. 25 W. H. Abrams, G. Tennille Sur. Drlg. sh. 3,480 ft.
Texas Co. No. 3 Rebecca Goldman, G. Tennille Sur. Drlg. sh. 2,612 ft.

Cedar Point Field—Chambers County

Standard Oil Co. of Texas-Salt Dome Oil Corp. No. 1-94 State. Drlg. 1,530 ft.

Seabreeze—Chambers County

Sun Oil Co. No. 3 Broussard-Hebert, T. &N.O. Sur., sec. 127. R.U.

Greens Lake—Galveston County

Sun Oil Co. No. 2 Houston Farm Dev. Co., D. Buckley Sur. Drlg. sh. 4,976 ft.

Hitchcock—Galveston County

Maco Stewart No. 3 fee, J. Spillman Sur. R.U.

Bammel—Harris County

H. M. Harrell et al No. 1 Polley, C. G McLean Sur. T.D. 6,286 ft.; perf. csg. 6,257-61 ft.; flwd. 150 bbls. fluid, 60% oil, 40% S.W.

Clinton—Harris County

Stanolind O. & G. Co. No. 2 Edwards, Reels & Trobough Sur. Drk.
Stanolind O. & G. Co. No. 1 Paul Weaver, Reels & Trobough Sur. T.D. 4,493 ft.; perf. csg. 3,735-45 ft.; flwg.; no ga.

Eureka—Harris County

J. Frazier No. 3 Vollmer-Neiman, J. Reinerman Sur. Drlg. sh. 5,260 ft.
Houston Oil Co. No. 1-D Laura Lackner, H. Reinerman Sur. T.D. 7,721 ft.; oil sd. 7,675-7,714 ft.
Means & McGehee No. 1-B Lackner, H. Reinerman Sur. R.U.
Means & McGehee et al No. 1-B Laura Lackner, H. Reinerman Sur. Drlg. 200 ft.
Tide Water Associated Oil Co. No. 1 Laura Lackner, J. Reinerman Sur. T.D. 7,800 ft.; run 5½-in. csg.; fsg.; tstd. S.W.

Fairbanks—Harris County

Amerada Pet. Corp.-Stanolind O. & G. Co. No. 2 R. S. Smith, J. Waugh Sur. Loc.
Amerada-Stanolind O. & G. Co. No. 1 Adell, J. Clarkson Sur. Drk.
Amerada-Stanolind O. & G. Co. No. 2 M. E. Cougat, Geo. Ayers Sur. Drk.
Amerada-Stanolind O. & G. Co. No. 3 M. E. Cougat, Geo. Ayers Sur. Loc.
Amerada-Stanolind O. & G. Co. No. 1 M. Korasz, G. Williams Sur. 9⅝-in. csg. 1,216 ft.; drlg. sh. 6,115 ft.

Amerada-Stanolind O. & G. Co. No. 2 O. J. Post, Geo. Ayers Sur. Drlg. 150 ft.
Carroll Oil Co. No. 1 Ralph Johnston, J. N. Dement Sur. T.D. 6,864 ft.; perf. csg. 6,839-43 ft.; would not flow; S.D.
Gem Oil Co. No. 2 B. W. Reid, Geo. Ayers Sur. Drk.
Showers & Moncrief No. 2 H. E. Ley, J. Waugh Sur. R.U.
Skelly Oil Co. No. 1 J. H. Emmott, J. Waugh Sur. Drlg. sh. 3,130 ft.
Smith and Ownby Drlg. Co. No. 1 J. Stephens. Drk.
Union Prod. Co. No. 1 Goodykoontz, W. S. Powell Sur. T.D. 7,590 ft.; 5¾-in. csg. 7,506 ft.; perf. csg. 7,444-53 ft.; tstd. gas; tstg.
Williams & Thompson No. 1 Ceperlo, G. Williams Sur. T.D. 6,843 ft.; W.O.C.
Windsor Oil Co. No. 2-A Ley, Geo. Ayers Sur. Drk.
Windsor Oil Co. No. 3 H. E. Ley, J. Waugh Sur. Drlg. sh. 6,416 ft.
Windsor Oil Co. No. 1 O. F. Parker, J. Waugh Sur. T.D. 6,843 ft.; comp.; no gauge.

Friendswood—Harris County

Humble O. & R. Co. No. 11 L. S. Beamer, T. Choate Sur. Drk.
Humble O. & R. Co. No. 12 L. S. Beamer, T. Choate Sur. T.D. 6,045 ft.; tstg.
Humble O. & R. Co. No. 3 Herman Hospital, T. Choate Sur. Drk.
Humble O. & R. Co. No. 1 J. L. Jones, Perry & Austin Sur. Drk.
Humble O. & R. Co. No. 1-B Port City Ice Co., W. D. C. Hall Sur. Drlg. 1,085 ft.
Humble O. & R. Co. No. 3 Settegast, T. Choate Sur. Drk.
Humble O. & R. Co. No. 1 E. E. Watson. Drk.

Cordele—Jackson County

Magnolia Pet. Co. No. 1 S. E. Drushel, Sur. No. 18. T.D. 2,672 ft.; 7-in. csg. 2,665 ft.
H. J. Porter No. 2 Pressley, P. White Sur. R.U.
H. J. Porter No. 1 Woussi, Peter White Sur. Loc.

Clam Lake—Jefferson County

Shell Pet. Corp. No. 2 McFaddin, S. A. Pace Sur. Cd. oil sd. 5,553 ft.; T.D. 8,198 ft., salt; top salt 8,156 ft.; 5-in. csg. 5,659 ft.; P.B. 5,545 ft.; tstg.

Cheek—Jefferson County

Shell Pet. Corp. No. 1 Ed. Pleasant, C. Hildebrand Sur. Drlg. sd.&sh. 3,237 ft.

North Cheek—Jefferson County

Magnolia Pet. Co. No. 5 J. H. Phelan, A. Stivers Sur. Drlg. 1,512 ft.

Hardin—Liberty County

Amerada Pet. Corp. No. 1 Lynott and Buffam, J. Robeson Sur. T.D. 7,650 ft.; W.O.C.
Ark. Fuel Oil Co. No. 2 W. J. Green, A. B. Hardin Sur. 10¾-in. csg. 1,918 ft. T.D. 7,654 ft.; tstg.
Atlantic Ref. Co. No. 2 J. F. Richardson, A. B. Hardin Sur. R.U.
Geo. Echols-Shell Pet. Corp. No. 1 J. H. Cessna, H. B. Johnston Sur. Drlg. 7,030 ft.
Gulf Oil Corp. No. 2 A. B. Tullos, H. B. Johnston Sur. R.U.
Humble O. & R. Co. No. 1 M. H. Johnson, H. B. Johnston Sur. Loc.
Shell Pet. Corp. No. 3 J. H. Cessna, H. B. Johnston Sur. Spd.
Smith and McDannald No. 1 J. R. Rives, A. B. Hardin Sur. T.D. 7,614 ft.; 5½-in. csg. 7,606 ft.; I.P. 596 bbls.; ¼-in. ck.
Woodley Pet. Corp. No. 2 Chambers, H. B. Johnston Sur. R.U.
Woodley Pet. Co. No. 1 Lynott & Buffam, James Robeson Sur. R.U.

McCrosky—Matagorda County

Pierce Est. No. 4-A Pierce. Drlg. sh. 2,410 ft.

Bay City—Matagorda County

Atlantic Ref. Co. No. 1 Gola. E. Hall Sur. Cd. sdy. sh. S.O. 8,130-8,209 ft.; drlg. sdy. sh. 8,551 ft.
Hamman Expl. Co. No. 1 C. W. Badouh, E. Hall Sur. R.U.

Spurger—Tyler County

Republic Prod. Co. No. 10 Hurd, N. Hurd Sur. T.D. 8,141 ft.; 7-in. csg. 7,819 ft.
Republic Prod. Co.-Houston Oil Co. No. 11 Hurd fee, N. Hurd Sur. Loc.

GULF COAST WILDCATS

Brazoria County

Texas Co. No. 1 M. W. Jones, H.T.&B. Sur. 15½-in. csg. 49 ft.; 10¾-in. csg. 1,452 ft.
Texas Co. No. 5 Freeport Sulphur Co., H. Burt Sur. Cg. sd. 3,174 ft.

Burleson County

Red Bank Oil Co. No. 1 Coffield, E. Sante Sur. T.D. 6,173 ft.; pmpd. 200 bbls. fluid in 18 hrs., 5 to 50% S.W.; tstg.; pmpg. oil and S.W.

Chambers County

Geo. Anderson No. 1 Julia Casey, W. D. Smith Sur. Loc.

Fort Bend County

Jack Frazier No. 1 Baker, Barrett and Harris Sur. R.U.
Strake Pet. Corp. No. 1 G. L. Dew, D Bright Sur. T.D. 6,410 ft.; P.B. and sdtrkd.; T.D. 6,350 ft.; trying to sidetrack; drlg. 6,939 ft.
Strake Pet. Co. No. 2 Sugarland Industries, Wm. Stafford Sur. T.D. 5,500 ft.; P.B. to sdtrk.; T.D. 7,063 ft.; abd.
Sam E. Wilson No. 1 Mt. Wood. Chas. Heywood Sur., C Lot 93. Drlg. sh. 1,312 ft.

Galveston County

Sun Oil Co. No. 1 Cade, A. Dickinson. 13⅜-in. csg. 2,218 ft.; T.D. 8,090 ft.; shot csg.; recvd. 3,400 ft.; P.B.; W.O. prep. to sdtrk. at 8,000 ft.; sdtrkd.; drlg. sh. 4,730 ft.

Harris County

Commerce Oil Co. No. 1 Meaderbrook Dev. Co., J. R. Harris Sur. R.U.
J. Frazier No. 2 Houston Deepwater Ld. Co., Thos. Earle Sur. T.D. 7,743 ft.; abd.
O. W. Killam No. 1 M. A. Dodd, W.C R.R. Sur., sec. 12. Drlg. sh. 3,967 ft.

Jasper County

John Mayo No. 1 Cartwright, Legrande Sur. Drlg. sh. 6,557 ft.

Jackson County

J. K. Dorrance No. 1 F. J. H. Guethlein, Morris & Cummings Sur. 10¾-in. csg. 773 ft.; W.O.C.
Magnolia Pet. Co. No. 1 West Ranch, Ramon Musquez Sur. T.D. 7,207 ft.; 7-in. csg. 5,680 ft.; perf. csg. 5,088-89 ft.; I.P. 1,121,000 ft. gas; 5/32-in. ck. went to S.W.; retesting.

Jefferson County

I. E. Harwell No. 1 State, Gulf of Mexico. T.D. 5,840 ft.; D.S. stk.; pulled in two: S.D.; may abd.

Liberty County

Wallace Hargrove et al No. 1 J. C. League, M. DeLos Santos Sur. Drk.
Sun Oil Co. No. 1 Caroline Jordan, L. Gedruf Sur. 10¾-in. csg. 1,889 ft.; drlg. sh. 5,260 ft.
Texas Co. No. 1 Paige, James Hanney Sur. Drlg. sh. 2,030 ft.

Matagorda County

Glenn H. McCarthy No. 1 Nancy Moffett et al, Susan Perkins Sur. Loc.

Montgomery County

Deep South Pet. Corp. No. 1 Foster Lbr. Co., Preyor Bryan Sur. Spd.
E. R. Kirkpatrick No. 1 Foster Lbr. Co., T.&N.O. Sur. No. 7. 10¾-in. csg. 477 ft.; drlg. sh. 3,180 ft.
J. Smith et al No. 1 J. V. Scott, F. A. B. Wheeler Sur. R.U.

Polk County

C. E. Gates No. 2 I. O. Jackson, J. W. Abbey Sur. Drk.

Waller County

Stanolind O. & G. Co. No. 1 Freeman, H.T.&C. Sur. No. 99. Drlg. 10,657 ft.

Wharton County

Humble O. & R. Co. No. 1 Duncan, D. Wade Sur. Drlg. sh. 4,225 ft.
Albert Plummer No. 2 M. Sorrell, S. F. Austin Sur. T.D. 3,733 ft.; 5½-in. csg. 3,690 ft.; swbd. dry.

S. W. TEXAS WILDCATS

Atascosa County

Altgell Mason No. 1 Vanegar, Francisco De La Garza Sur. S.D. 2,796 ft.; no report.

Bastrop County

R. C. Franklin No. 2 Yarrington, Jose Manuel Bangs Sur. S.D. 1,725 ft.
Oscar Raez No. 1 Walters, Michael Grun Sur. Drlg. sh. 1,640 ft.; no report.
Paul Texas and Ashby No. 1 J. T. Grizzard, Andrew Graham Sur. T.D. 2,250 ft.; rmg.

Bee County

Dirks Bros. No. 1 Amberg, A.B.&M. Sur. Drlg. sh. 2,130 ft.

Bexar County

Fain-Harrison and Jenkins No. 1 Hansen, John Christopher Sur. 10-in. csg. 28 ft.; S.D. 925 ft.
Nami Herman No. 1 W. F. Fields, A. Bustillos Sur. T.D. 737 ft.; 5⅛-in. csg. on bttm.; prep. to D.D.

Brooks County

Atlantic Ref. Co. No. 1 Mestena O. & G. Co., Las Mestenas Gr. T.D. 5,404 ft.; abd.

Caldwell County

Luling O. & G. Co. No. 1 Brown, Spencer Morris Sur. T.D. 3,475 ft.; abd.
Banke Miller Oil Co. No. 1 Martindale Hector McNeil Sur. T.D. 3,223 ft.; S.D.

Calhoun County

Hiawatha O. & G. Co. No. 2 J. J. Roemer. J. Ogsberry Sur. Drlg. sh. 3,010 ft.

Cameron County

Saxet Prod. Co. No. 1 Port Isabel Irrig. Co. Sur. 30. Drk.

De Witt County

Marjo Oil Co. No. 1 W. D. McCurdy, John Hunt Sur. Drlg. sh. 1,036 ft.; no report.

Duval County

Ark. Fuel Oil Co. No. 2 Cuellar, sec. 96. Drlg. 5,230 ft.
N. V. Duncan No. 1 Worden-Drought, Juan Lopez Sur. No. 154. Drlg. sh. 574 ft.
James Foster No. 1 Foster, B.S.&F. Sur. No. 268. S.D. 40 ft.
Standard Oil Co. of Texas No. 1, Dolores Garcia Sur. 16-in. csg. 1,015 ft.; 10¾-in. csg. 3,487 ft.; drlg. sh. 3,730 ft.
Trinity Drillers No. 1 Vaello, J. P. Nelson Sur. No. 24. Drlg. sh. 3,694 ft.

Edwards County

Evans & Love No. 1 Steve Brown, Blk. 6, G.W.T.&P. Sur. S.D. 6,261 ft.

Frio County

F. L. Thompson No. 1 Davis, G.B.&C.N. G. Sur. No. 1. Cd. oil sd. 3,722-59 ft.; sat. chk. logged at 4,964-76 ft.; T.D. 5,687 ft., L.; D.S.T. 5,606-87 ft.; tstd. mud and sulfur wtr.; S.D.

Goliad County

Bunte Prod. Co. No. 1 Crews, Maria Jesusa DeLeon Sur. Cg. 3,937 ft.

Gonzales County

Heard-Hall & Young No. 1 Clark, Robt. S. Armistead Sur. Drlg. sh. 1,015 ft.

Guadalupe County

Glenn Stewart No. 1 Maierhoff, R. M. Forbes Sur. T.D. 2,360 ft.; abd.

Hidalgo County

Ralph Fair No. 1 Lynn, Juan Jose Hinojosa Sur. Drlg. sh. 6,609 ft.
Hidalgo Prod. Co. No. 1 Daskam Corp., Porc. 45, Blk. 34. T.D. 3,296 ft.; D.S. stk.; pulled drk. in; S.D.
Wheelock & Collins No. 1 Temple Lbr. Co., Lino Cavaos, Porc. 57-A. T.D. 1,208 ft.; P.B. to 750 ft.; crooked hole.

Jim Hogg County

Humble O. & R. Co. No. 2 Kelsey Bass, San Rafel Gr. R.U.

Jim Wells County

E. Calloway et al No. 1 E. O. Cook. Lavaca Grant Sur. T.D. 5,511 ft.; 7-in. csg. 5,350 ft.; perf. csg. 5,175-82 ft.
Humble O. & R. Co. No. 1 Wm. Adams, Marcellino Lopez Gr., Abst. No. 28. Drlg. sh. 2,526 ft.
Magnolia Pet. Co. No. 1 Valades Hrs., La Anima Sola Gr. T.D. 6,390 ft.; cutting D.S.
Mills Bennett Prod. Co. No. 1 W. R. Perkins, Lavaca Gr. Tstd. S.W. 5,570-5,658 ft.
Rehmet & Wolcott No. 1 Balzon, I.&G. N. R.R. Sur., sec. 142, C Lot 27. 10¾-in. csg. 499 ft.; drlg. sh. 5,219 ft.
Shell Pet. Corp. No. 1 C. H. Von Blucher, Lucinda Best Sur. Drlg. sh. 1,610 ft.
Southern Minerals Oil Corp. No. 1 J. R. Trussells, Lavaca Gr. 10¾-in. csg. 540 ft.; S.D. 4,000 ft.

Karnes County

Randon Oil Co. No. 1 Ruhman, Carlos Martinez Sur. Drlg. 2,000 ft.

Kendall County

Geo. Dorsey No. 1 Flanagan, J. Sweeney Sur. No. 12. S.D. 350 ft.
Millican and Norman No. 1 Werner, J. F. Torrey Sur. Drlg. 671 ft.

Kerr County

Edminston No. 1 Saul, Sur. 47. S.D. 55 ft.
H. C. Starkey No. 1-A Saue, T.W.N.G. R.R. Sur. S.D. 190 ft.

Kimble County

C. A. Dawson et al No. 1 Wilkinson, Brook and Burleson Part., B.S.&F. Sur. No. 23. T.D. 420 ft.; hung 7-in. csg. 326 ft.

Kleberg County

Pure Oil Co. et al No. 1 State Ld., Tr. 68. Laguna Madre Bay, Lse. No. 528. 18⅝-in. csg. 198 ft.; cg. 6,710 ft.

La Salle County

Eugene Garner No. 1 Yeager, Lot 6. Wallace Subd. of Sur. No. 39. T.D. 1,828 ft.; abd.

Lee County

Eleoussa Oil Co. No. 1 Sanders, J. Vin Roeder Sur. T.D. 4,398 ft.; prep. to resume drlg.
Fred Pederson et al No. 1 Brown, David Hudson Sur. M.I.M.

Live Oak County

J. K. Adair No. 1 Schultz Live Stock Co., Wm. J. Pierce Sur. 10¾-in. csg. 20 ft.; S.D. 480 ft.
J. B. Chew No. 1 Cartwright, J. Poitevent Sur. No. 1. T.D. 6,598 ft.; abd.
R. H. Feltner No. 1 Reed, I.&G.N. R.R Sur. 15. R.U.
Hanna et al No. 1 West, C. O. Ranland Sur. R.U.
McSpaddin & Tombs No. 1 Jones, John Ely Sur. T.D. 3,976 ft.; abd.
G. Schimmel et al No. 1 Geo. West, G. L. Haas Sur. T.D. 210 ft.

McMullen County

Heard-Hall and Young No. 1-A Byrne, Geo. Pittuck Sur. No. 7. Loc.
S. M. Nesser No. 1 Franklin. J. Poitevent Sur. No. 33. Drlg. 2,212 ft.; no report.
G. G. Newton No. 1 Bryne, Geo. Pettuck Sur. S.D. 977 ft.; abd.
Red Bank Oil Co. No. 1 Nueces Ld. & Livestock, J. McGrain Sur. R.U..

Medina County

F. A. Brown No. 1 Senne, A.C.H.&B Sur. 105. Logged 8 ft. of sat. oil sd 802-11 ft.; (corrected); T.D. 903 ft.; 6⅝-in. csg. 805 ft.
J. W. Cromwell No. 1 J. W. Tondre. J. Rogers Sur. T.D. 1,105 ft.; prep. to acdz.
D. K. J. Oil Co. No. 1 Burrell. T.D. 2 039 ft.; S.D. after swbg. dry.
Gee Hayes et al No. 1 Conrad, J. Keppler Sur. S.D. 586 ft.; T.A.
Geo. Hayes and Tarver No. 1 Mann, J. H. Isbell Sur. No. 10. Drlg. 110 ft.
R. Q. Stivers No. 1 Jungman, N. B. Rogers Sur. No. 33. Drlg. 1,400 ft.
Taylor & Pepper No. 1 Saathoff, Peter Eichorn Sur. T.D. 935 ft.; fsg.
M. L. Walker No. 1 Zuberbulen, A. Bonamy Sur. R.U.; S.D.
Ziegler et al No. 1 Wiemers, F. Thurmm Sur. Loc.

Milam County

Clark & Morgan No. 1 Johnson, Juan Jose Acosta Sur. T.D. 1,971 ft.; fsg.
Fritz Fuchs No. 1 Stark, M. J. Dalgado Sur. 10-in. csg. 10 ft.; drlg. 554 ft.
Texedo Oil Co. No. 1 Graham, Charles Cornea Sur. Logged S.O. 1,135-36 ft.; T.D. 1,808 ft.; fsg. for tbg.
Texedo Oil Co. No. 1 Paul Garves, C. Robertson Sur. S.D. 1,170 ft.; C.O.; set 7-in. csg. 1,167 ft.; S.D. 1,520 ft.
Western Gulf Pet. Co. No. 1 Batte, Jose Teal Sur. Drlg. 680 ft.

Nueces County

Coast Line Oil Co. No. 1 State (Redfish Bay), State Tr. No. 32. Logged 7,338-56 ft.; T.D. 8,660 ft.; 7-in. csg. 8,637 ft.; perf. csg. 8,555-76 ft.; flwd. S.W. under 250 lbs. press.; tstd. S.W. below 8,500 ft.; sqzd. off perf.; W.O.C.

Refugio County

I. J. Allen No. 2 Rooke, Jose Miguel Addrite and Jose Maria Aldrite 6¾ Lge. D.S.T. 5,382-93 ft.; tstd. 400 lbs. press.; recvd. gas-cut mud; drlg. sh. 6,068 ft.

Starr County

Sun Oil Co. No. 1 Smith, A. J. Smith Sur. Loc.
Sunrise Pet. Co. No. 1 Calderoni, Jose Antonio Falcon, Porc. 80, Sh. 58. S.D. 230 ft.
Wheelock & Collins No. 1-A Guerra, Santa Cruz Gr. Cg. sd. S.O.&G. 6,639 ft.; drlg. sh. 6,913 ft.
W. W. Zimmerman et al No. 1 Starr Co. Cattle Co., Juan De La Garza, Porc. 89. Drlg. 200 ft.

Travis County

L. G. Priest No. 1 Mazock, J. M. Leavy Sur. No. 5. Drlg. 450 ft.
John R. Sterrett No. 1 Washington, Jose Antonio Navarro Sur. Drlg. L. 1,942 ft. No report.
R. F. C. Oil Co. No. 1 Jones, Reuben Hornsby Sur. No. 17. S.D. 1,050 ft.

Victoria County

Superior Oil Co. No. 1 A. R. Robertson, C Lot 10, Blk. R, Allison Richey Subd. R.U.

Webb County

French Oil Co. No. 6 Benavides, B.S.&F. Sur. No. 706. S.D. 2,220 ft.; abd.
Garrison & Paris No. 1 Benavides, Hale Subd. of M. Arispe Gr., C Blk. 107. R.U.
W. F. Houser No. 1 Garcia, Villareal Sur. T.D. 2,665 ft.; 5½-in. csg. 2,565 ft.
W. R. Nicholson No. 1 fee, M. Valpe Sur. Loc.
E. J. Sawyer No. 1 Garcia-Villareal, J. M. Garcia Sur. Cd. oil sd. 2,465-87 ft.; S.D. 2,511 ft.

Williamson County

F. J. Anderson No. 1 Teichelman Absalam, Jett Sur. Drlg. 43 ft.
Marion Aldridge No. 1 Kroschewsky. 7-in. csg. 969 ft.; T.D. 1,084 ft. (corrected); P.B. 1,047 ft.; swbd. S.W.; P.B.; abd.

Wilson County

Lincoln Pet. Co. No. 1 Blake hrs. of Simon and Juan Dearocha Sur. T.D. 851 ft.; abd.
Stapper Oil Co. No. 1 J. McDaniel, L. Manchoca Sur. Drlg. sh. 2,287 ft.

Zapata County

C. H. Lewis No. 1 Garza, Blk. 13, Sur. 413. Loc.
Thompson & Lowe No. 1 Ramirez, Blk. 6, Doyle Subd. of Porc. 18. Drlg. 730 ft.

EAST TEXAS

(Border counties)

Rodessa—Cass County

Red Iron Drlg. Co. No. 1 Echols, Myers Sur. Comp.; 373 B.P.D.; ¾-in. ck.; T. P. 100 lbs.; C.P. 500 lbs.; Dees sd. 5,954-57 ft. and 5,959-69 ft.; set 7-in. csg. 5,952 ft.; T.D. 5,975 ft.

Bowie County

King Oil Corp. No. 1 Watts, Geo. Brinlee Sur. T.D. 4,574 ft.; prep. deepen.

Marion County—Rodessa

Ark-La. Gas Co. No. 1 Belcher, Coy Sur. Drlg. sh.&L. 6,023 ft.
Ark.-La. Gas Co. No. 1 Johnson, Alex. Johnson Sur. Drlg. L.&sh. 3,718 ft.
Bauman Dunn & Fisher No. 1 Graham, John Hanks Sur. Set 9⅝-in. csg. 1,993 ft.; fsg. 3,610 ft.
T. Bell et al No. 1 Moseley, D. Lane Sur. T.D. 2,768 ft.; S.D.
Gulf Oil Corp. No. 1 Blake, Jackson Sur. Drlg. L.&sh. 4,595 ft.
Harvey, Henderson & Clardy No. 5-B Henderson, Ewing Sur. Perf. 6,026-32 ft.; tstd. S.W.; reperf. 6,032-40 ft.; will attempt sqze. job; 5½-in. csg. 6,040 ft., T.D.
Holcomb & Thomason No. 1 Bohn, Coy Sur. Drlg. sh.&L. 5,522 ft.
Holcomb & Thomason No. 1 Bramlett,

245 ft. S line, 20-ac. lse., 400 ft. E line, Gentry Sur. Set 5¾-in. csg. 6,064 ft.; circulated with oil and swbg. to test; T.D. 6,082 ft.; perf. 6,052 ft.; swbd. some oil; cmtd. off bttm. hole swbg. to test, 6,080 ft.

Hollandsworth Drlg. Co. No. 1 Hill, 15-ac. tr., Smith Sur. Drlg. L.&sh. 4,292 ft.

Ohio Oil Co. No. 3 Moseley, Francis Sur. Set 7-in. csg. 6,112 ft.; T.D. 6,143 ft. Comp.; 568 B.P.D.; ¼-in. ck.; T.P. 850 lbs.; C.P. 980 lbs.

Ohio Oil Co. No. 4 Moseley, J. P. Francis Sur. Drlg. sh. 1,400 ft.

Phillips Pet. Co. No. 2 Denton, Coy Sur. Drlg. L.&sh. 5,633 ft.

Phillips Pet. Co. No. 1 Jackson, Hanks Sur. Cg. 6,100 ft.

Shell Pet. Corp. No. 4 Schluter, Smith Sur. Drlg. L.&sh. 5,086 ft.

Union Prod. Co. No. 9 Hutchinson, Coy Sur. Drlg. sh.&L. 5,146 ft.

Panola County

Texas Co. No. 1 Claude Adams, T. Cox Sur. Top lower Marine 7,792 ft.; drlg. hd. sd. 8,557 ft.

Sabine County

Pet. Heat & Power Co. No. 1 Jasper State Bank, McDonald Sur. T.D. 2,506 ft., sd.; S.D.W.O.

Shelby County

Center Oil Co. No. 1 Windham, A. H. English Sur. T.D. 3,422 ft.; set 6⅝-in. csg tstg.

Mallard & Locke No. 1 W. E. Roller Est., Sullins Sur. Drlg. 5,230 ft.

Porter Oil Co. No. 1 Pickering Lbr. Co., C. E. Henry Sur. T.D. 5,085 ft.; S.I.

W. A. Reddit No. 2 Pickering Lbr. Co., P. J. Loggins Sur. Cg. 421 ft.

WEST TEXAS WILDCATS

Andrews County

H. S. Forgerson No. 1 Lockhart-Brown Swbg. 4,584 ft.

Rhodes & Tompkins No. 1 Emma Cowden, sec. 1, Blk. 44, T.&P. Sur. S.I. 4,420 ft.

Cochran County

Devonian-Honolulu-Cascade No. 1-C-8 Duggan, sec. 8, Oldham C.S.L. Sur. S.I. for test, 5,051 ft.

Texas Co. No. 1 Mallett Ld. & Cattle Co., sec. 7, Blk. G, P.S.L. Sur. Tstg. 5,058 ft.; pmp. 190 B.O. in 21 hrs.

Coke County

Barnett Pet. Co. No. 1 J. R. Mims, sec. 9, Blk. W, T.&P. Sur. Rng. 2-in. 5,051 ft.

Crane County

Texas Co. No. 1-G Univ., sec. 7, Blk. 30, Univ. Sur. Drlg. 420 ft.

T. B. Cranfill, Trustee, No. 1 J. B. Tubbs, Blk. 32, sec. 20, P.S.L. Sur. Last report.

Gulf Oil Corp. No. 4 McKnight, sec. 3 Blk. B-21, P.S.L. Sur. Drlg. 5,284 ft.

Crockett County

R. H. Henderson No. 1 University, Univ. Sur., Blk. 14, sec. 18. Prep. shoot 1,561 ft.

Short & Gillette No. 1 J. W. Owens, Jose Zunegas Sur. S.D.O. 1,845 ft.

Culberson County

Harry J. W. Nichaus No. 1 C. M. Caldwell, sec. 15, Blk. 109, P.S.L. Sur. S.D.O. 2,500 ft.

Harry J. W. Niehaus No. 1 fee, Blk. 109, sec. 13, P.S.L. Sur. 1,800-ft. tst.; S.D. 315 ft.

Quito Oil Co. No. 1 Cameron Lbr. Co., sec. 24, Blk. 81, P.S.L. Sur. S.D. 770 ft.

Dickens County

Bond D. Jones No. 1 Ford et al, I.&G.N. Sur. Drlg. 200 ft.

Ector County

Sinclair Prairie No. 3-A Johnson, sec. 37, Blk. 43, T.&P. Sur. Drlg. 1,646 ft.

Sinclair Prairie No. 2-B P. Moss, sec. 40, Blk. 44, T.&P. Sur. Drlg. 1,020 ft.

Stogner et al No. 1 Hendrick, sec. 4, Blk. 43, T.&P. Sur. Fsg. 4,294 ft.

El Paso County

Tri-State Oil Co. No. 1 Kinkel. Drlg. cmt. 3,571 ft.

Fisher County

S. & D. Daube and Forest Dev. Co. No. 1 A. C. Bennett, sec. 51, Blk. 2, H.&T.C. Sur. S.I. 3,699 ft.

Floyd County

Mills Bennett No. 1 T. Montgomery, F. J. Latham Sur., 6 mi. S of Floydada. Fsg. 5,960 ft.

Gaines County

Eastland Oil Co. No. 1 R. C. Dunbar, sec. 24, Blk. A-12, P.S.L. Sur. S.D.O. 4,640 ft.

J. T. Perryman, Jr., No. 1 C. H. Doak, D.&W. Sur., Blk. H, sec. 43. Rng. 7-in. 4,735 ft.

Riddle & Warr No. 1 J. B. Brown et al, sec. 26, Blk. G, C.&M.R.R. Sur. Drlg. 4,370 ft.

Garza County

Gulf Oil Corp. No. 1 Swanson, sec. 25, Blk. 2, H.&G.N. Sur. Cg. 6,343 ft.

Glasscock County

O. B. Greathouse No. 1 Burns, sec. 221, Blk. 29, W.&N.W. Sur. S.D. 180 ft.

Hockley County

Gulf Oil Corp. No. 1 Mallett Ld. & Cattle Co., sec. 6, Blk. X, P.S.L. Sur. Pulling tbg. and rods 5,125 ft.

Gulf Oil Co. No. 2 Mallett, Lge. 34, Labor 25. Drk.

Sid W. Richardson No. 2 Slaughter, Lge. 39, Labor 58, Maverick Sur. W.O.C. 510 ft.

Skelly Oil Co. No. 1 Elwood Est., Howard C.S.L. Sur., Lge. 15. W.O.C. 4,290 ft.

Howard County

Anderson & Prichard No. 1 H. Hyman Est., sec. 85, Blk. 29, W.&N.W. Sur. Loc.

Lockhart Pet. Corp. No. 2 Robert Scott, W.&N.W. Sur., Blk. 29, sec. 86. Drlg. 2,175 ft.

W. B. Powell, Trustee, No. 1 Guitar Trust, Blk. A, sec. 17, Bauer & Cockrell Sur. Drlg. 785 ft.

Hudspeth County

Haymon Krupp Oil & Ld. Co. No. 1 Thaxton, SE¼ sec. 34, Blk. 74, Twp. 6. Drlg. 4,692 ft.

Haymon Krupp No. 1 Briggs, sec. 24, Blk. 73, Twp. 7, T.&P. Sur. Tstg. for gas 4,225 ft.

Jeff Davis County

Joiner Oil Corp. No. 1 Jones-Coffield S.D. 3,742 ft.

Lynn County

John L. Baldridge No. 1 Alma Lbr. Co., sec. 151, H.E.&W.T. Sur. Drlg. cmt. 4,450 ft.

Martin County

W. D. Anderson No. 1 J. R. Vance, sec 9, Blk. 36, T.&P. Sur. Drlg. 3,625 ft.

Menard County

C. D. Haggerty No. 1 Callon, sec. 36, Jim Franz Sur. Drlg. 1,140 ft.

Pecos County

Cox & Moore No. 1 White & Baker, sec 43, Blk. Z, T.C.R.R. Sur. S.D. 8-in. 430 ft.

Ed Falney No. 1 Trees, sec. 63, Blk. 8, H.&G.N. Sur. Reblg. drk.; S.D. 2,055 ft.

J. N. Gregory et al No. 1 Humble-O'Niell, H.&G.N. Sur., Blk. 10, sec. 74. Drlg. 80 ft.

J. D. Kugle, Jr., No. 1 H. L. Cordz, sec. 101, Blk. 8, H.&G.N. Sur. Drlg. 720 ft.

Magnolia Pet. Co. No. 1 McKee. P.B. 6,197 ft.; P.B. 6,180 ft.; raising 7-in. from 6,180 ft.

E R., Minshall et al No. 1 Haynie, sec. 28, Blk. 146, T.&St.L. Sur. Drlg. plug 2,032 ft.

S. Thompson No. 1 Elsinore Cattle Co., sec. 54, Blk. D, G.C.&S.F. Sur. W.O.C. after drlg. by tools 7,215 ft.

Reeves County

Ohio Oil Co. No. 1 Papham, sec. 18, Blk 54, T.&P. Sur. C.O. 2,082 ft.

Runnels County

Homer Price No. 1 Beddo, sec. 51, Thompson Casey Sur. C.O. 3,500 ft.

Scurry County

Coffield & Guthrie No. 1 E. E. Spears et al, sec. 130, Blk. 97, H.&T.C. Sur. Drlg. 7,420 ft.

Gursham-Hunter No. 1 C. M. Wellborn, sec. 142, Blk. 25, H.&T.C. Sur. Loc.

Robinson Drlg. Co. No. 1 Martin, sec 147, H.&T.C. Sur. P.B. 2,500 ft.; S.D.O.

Sterling County

Loffland Bros. & Moore Bros. No. 2 Parramore, sec. 78, Blk. 17, S.P.R.R. Sur. D.&A. 1,904 ft.

J. W. Sward No. 1 Brennand, sec. 107, Blk. 2, H.&T.C. Sur. S.D.R. 2,260 ft.

W.F.W. Oil Co. et al No. 1 R. W. Foster, sec. 9, Blk. 13, S.P.R.R. Sur. Drlg. 2,004 ft.

Stonewall County

Bert Fields No. 1 J. M. Lee, J. E. Pierson Sur. Drlg. 3,646 ft.

General Crude Oil Co. No. 1 J. D. Smith, sec. 371, Blk. 2, H.&T.C. Sur., 12 mi. N Rotan. W.O.C. 4,645 ft.

Percy Jones et al No. 1 fee, Austin & Williams Sur. 348, sec. 2. Cg. 3,054 ft.

E. C. Lawson No. 1 Ada Pumphrey, Eli Chandler Sur. Drlg. 200 ft.

Swanson & Parriott No. 1 H. T. Carlisle, sec. 293, Blk. D, H.&T.C. Sur. Drlg. 4,915 ft.

Terrell County

Schermerhorn Oil No. 1 H. P. Allison, sec. 22, Blk. B-2, C.C.S.D. & R.G.N.G. Sur. 2,500-ft. test. Loc.

Tom Green County

Spinner No. 1 Reed, Mason Ferry Ranch. Sur. Drlg. by baller 4,375 ft.

J. B. Watson No. 1 Llano, C.S.L. Sur., sec. 16, 500-ft. test. Drlg. 84 ft.

Ward County

M. J. Delaney No. 1 J. E. Cooper, H.&T.C. Sur. Tstg. 2,092 ft. (last report).

J. E. Fitzpatrick et al No. 1 F. K. Dyer, sec. 135, Blk. 34, H.&T.C. Sur. S.D.O 5,085 ft.

John Poindexter No. 1 V. Meyers, sec. 17, Blk. 32, H.&T.C. Sur. Drk.

S J. Rixford No. 1 W. B. Crump, sec. 2, Blk. 34, H.&T.C. Sur. Drlg. 2,508 ft.

O. E. Schkode No. 1 Boogher, sec. 1, Blk. 32, H.&T.C. Sur. Tstg. 2,108 ft.

Winkler County

Magnolia Pet Co. No. 13 State-Walton sec. 14 Blk. B-3, P.S.L. Sur. S.I. 3,231 ft.; last report.

J. R. Sharp No. 1 Sharp-Crume, sec. 7, Blk. B-2, P.S.L. Sur. C.&P.

J. R. Sharp No. 2 Sharp-Crume, sec. 7, Blk. B-2, P.S.L. Sur. Loc.

Yoakum County

R. H. Gill No. 1 S. J. Doxon, sec. 611, Blk. D, Gibson Sur. Drlg. 1,630 ft.

Gulf Oil No. 1 Lucy K. Moore, sec. 897, Blk. D. Drlg. 3,765 ft.

Helmerich & Payne No. 1 S. O'Dowd, sec. 896, Blk. D, J. H. Gibson Sur. S.I. 5,035 ft.

E. C. TEXAS WILDCATS

Anderson County

J. G. Mayo et al No. 1 Royall & Davey, L. McClowd Sur., 12 mi. E of Palestine. W.O.C. 3,788 ft.

Angelina County

K. L. McHenery No. 1 L. Henderson, Wm. White Sur., 1 mi. E of Hamlet. Drlg. 5,623 ft.

Cherokee County

J. G. Mayo No. 1 Travis, T. Quevada Sur., 2 mi. SE of Mt. Salmon. Drlg. 3,411 ft.

Dallas County

Plaza Oil Co. No. 1 Davidson Marchants Sur., 1 mi. NW of Seagoville. Cg. 2,783 ft.

Falls County

M. H. Hayes No. 1 A. Garrett, J. M. Sanches Sur., 2 mi. NE of Lott field. Cg. 1,329 ft.

Franklin County

V. A. Hughes No. 1 W. E. Haydon, W. Landrum Sur., 1 mi. SE of Hagansport. R.U.

Grayson County

Epenhauser No. 1 J. M. Rogers, L. Kelly Sur., 1½ mi. NE of Whitesboro. Drk.

Mildred Oil Co. No. 1 L. C. Neatherly, Chas. Quillers Sur., 1 mi. S of Collinsville. Loc.

Gregg County

Humble-Gulf No. 1 Porter Horton, H. G. Hudson Sur., 3½ mi. SW of Longview. 7,500-ft. test.

Humble O. & R. Co. & Gulf Oil Corp. No. 1 E. Robertson, M. Mann Sur., 2½ mi. SW of Longview Trinity test. Elev. 272 ft.; P.B. 7,907 ft.; comp.; 5,000,000 ft. gas.

Henderson County

Peyton Bros. No. 2 Carter. Drk.

Houston County

Humble O. & R. Co. No. 1 Daily & Taylor, J. G. Thompson Sur. S.I. 5,894 ft.

Humble Oil & Ref. Co. No. 1 C. C. Hill, J. L. LaReviere Sur., Navarro Crossing field. R.U.

Sun Oil Co. No. 1 R. S. and H. H. Daily, J. G. Thompson Sur., 3 mi. SE of Navarro Crossing. Tstg. 5,893 ft.

Lamar County

Dahl & Barr No. 1 Lewis & McQuiston, R. Russell Sur., 1 mi. NE of Paris. D.&A. 1,253 ft.

Leon County

Lone Star Gasoline No. 2 G. W. Lee, R. Hunter Sur., 5 mi. SE of Buffalo gas area. Drlg. 4,168 ft.

Limestone County

A. H. Larver No. 1 C. E. Herrod, Eli Davis Sur., 5 mi. S Grossbeck. Drlg. 2,457 ft.

McLennan County

Lisle Steele No. 1 C. H. Cherry, M Martinez Sur., 4½ mi. SE of Waco. S.D. 804 ft.

Russell & Thompson No. 1 L. L. Phillips, C. O. Campo Sur., 4 mi. S of Waco. S.D.W.O. 1,070 ft.

Nacogdoches County

C. W. Voyles et al No. 1 M. E. Rider, O. W. Randall Sur., 3 mi. E of Caro. Drk.

Navarro County

R. G. Dickson No. 1 A. M. Swink, W. Hudson Sur., 3 mi. S of Richland. D.&A. 440 ft.

B. T. Fearis No. 1 W. Montgomery, I. Redding Sur., 7 mi. S of Kerns. M.I.M.

J. O. Griffiths No. 1 Haynes, Able Parsons Sur., 4 mi. NE of Kerns. Crooked hole; D.&A. 3,502 ft.

Mrs. Jane Robinson No. 1 Fortson Bros., Eli Smith Sur., 5 mi. NE Corsicana. S.D. 2,765 ft.

Topez Oil No. 1 M. Mizell, T. J. Chambers Sur., 14 mi. NE of Corsicana. D.&A. 2,674 ft.

Red River County

Daniels et al No. 1 J. J. Gaston, J. Guest Sur., 2 mi. S of Detroit. Drlg. 300 ft.

Walters et al No. 1 Phamplin, W. Moore Sur., 3 mi. SE of Kanawha in NW part of county. S.D. 555 ft.

C. E. Whitehead No. 1 R. H. Ringwald, A. Moore Sur., 1 mi. NW of Manchester. S.D. 200 ft.

Smith County

Combest et al No. 1 Dora Kendall; J. Williams Sur., 1¼ mi. SW of Jamestown. Old T.D. 2,798 ft.; washing 2,794 ft.

H L. Hunt et al No. 1 S. H. Bradly, T. P Payne Sur., 10 mi. E of Tyler at Chappel Hill. Comp.; 275 bbls. dist. day; T. D. 7,528 ft.

Upshur County

E. J. Dupree No. 1 W. A. Lawrence, R Polly Sur., 4 mi. S of Gilmer. S.D. 4,308 ft.

RANGER (CENTRAL TEXAS) DISTRICT

Callahan County

Cooper, Weeks & Hughes No. 1 C. D Straley, 660 ft. from W L, 1,880 ft from N L, sec. 370, Geo. W. Denton Sur. Ordovician test. Prep. to dpn. 4,450 ft.

Joe Gallagher No. 1 W. T. Harris, 200 ft. from S line, 1,050 ft. from E line sec. 347, G. W. Denton Sur. Drlg. 1,395 ft.; last report.

J. H. Howell No. 1 E. I. Vestal, 1,149 ft. F line, 1,000 ft. N line, Jesse Dyson Sur., 2 mi. NE Cross Plains. Drlg. 2,900 ft.

Hal Hughes No. 1 Tom Windham, 660 ft. from N and W lines SW¼ sec. 369, Geo. Hancock Sur. Drlg. 300 ft.; last report.

J. C. Jackson et al No. 1 Thompson, 2 mi. S of Eula, sec. 30, B.B.B.&C. Sur. C.O. 1,645 ft.

Petroleum Drlg. Co. No. 1 Cook & Jordan, 760 ft. from E L, 1,838 ft. from N L, sec. 350, Geo. Hancock Sur. Ordovician. W.O.C. 4,486 ft.

Wittmer Oil & Gas Properties, Inc. No. 1 R. D. Williams et al, 300 ft. from N line, 467 ft. from W line sec. 2,269, T.E.&L. Sur., 2 mi. NE Putnam, 4,500-ft. test. S.O. in Ellenburger 4,077 ft.; drl. sulf. wtr. 4,115 ft., T.D.; P.B.; shot 290 qts. 3,239-3,435 ft.; est. 50 B.W. and 10 B.O. P.D.; acdzd. 5,000 gal.; tstg.; last report.

Coleman County

Anzac Oil Corp. No. 1 Burk, A. Williams Sur. Drlg. 1,940 ft.

H. M. Coleman No. 1 Ford, A. S. Lipscomb Sur. Drlg. 700 ft.

F. L. and E. R. Cooper No. 1 W. R. Stockard, 330 ft. from NL, 330 ft. from WL, N½ SE¼ sec. 23, T.&N.O. Sur. Rotary to 3,650 ft.; M.I.M.

S. M. Devine et al No. 1 Masterson, 2 mi. W of Burkett, Asa Wickson Sur. D.&A. 2,633 ft.

Garrett Oil Co. No. 1 W. S. Smith et al, 4 mi. SE Coleman, J. Thiele Sur. Drlg. by csg. 2,060 ft.; last report.

Bob Murray No. 1 Dibrell, H. Kigan Sur., near Camp Colorado. Fsg. 2,575 ft.

Eastland County

Dobbs Oil Co. No. 1 Greer, J. E. Hardy Sur., Ellenburger test. S.D. 800 ft.

Dorothy Oil Co. No. 1 Mrs. J. L. Johnson, 1,000 ft. from S line, 1,080 from W line, E½ SW¼ sec. 29-4, H.&T.C. Sur. Drlg. 1,310 ft.

Hayner, Reaves & Hose No. 1 P. L. Larkin, 3 mi. NW Rising Star, 912 ft. from W line, 546 ft. from S line, NW¼, sec. 40-2, E.T.R.R. Sur. C.O. 3,073 ft.

Neil A. Moore No. 7 Holcomb Heirs, 970 ft. from W line and 600 ft. from N line, SW¼ 1-4, H.&T.C. Sur. Loc.

Erath County

McGee Dev. Co. No. 1 Till Robinson, Wm. Ashworth Sur., 2 mi. SE of Desdemona. Drlg. 1,295 ft.; last report.

Fisher County

Forest Dev. Corp. & Daube No. 1 L. G. Bennett, 660 ft. from N and E lines, sec. 51-3, H.&T.C. Sur. Rotary to 4,500 ft.; 3 mi. SW of Rotan. Swbg., est. 30 bbls.; tstg. 3,699 ft.

Owens-Snebold & A. C. Varner No. 1 J. H. Millsap, 3,500-ft. wildcat, 2 mi. NW McCaulley, 330 SL 330 WL, sec. 61-2, H.&T.C. Sur. Drlg. 1,440 ft. last report.

Haskell County

Algord Oil Co. No. 1 J. F. Jones, 330 ft. from S and W lines, E. T. Roche Sur. No. 4, Abst. 525. Loc.

Fain-McGaha Oil Corp. No. 1 T. G. Hendrick, C W¼ sec. 104, Indianola Ry. Sur. Drlg. 2,725 ft.

Jones County

Dunigan Bros. and Fred Hyer No. 1 Gaither, 4½ mi. N of Anson, sec. 38, B.B.B.&C. Sur. Drlg. 2,722 ft.

R. B. Farris No. 1 Chas. Donohoo, 220 ft. from S and E lines, N½ sec. 5, B.B.B. &C. Sur. Rng. 8-in. 1,800 ft.

Grisham-Hunter Corp. No. 2 E. D. Appling, 1,140 ft. fr. E L, 1,208 ft. S L, NW¼ sec. 32, B.B.B.&C. Sur. Loc.

S. C. Herring No. 1 B. L. Ellis, 330 ft. fr. N and E lines, SE¼ sec. 8-15, T.&P. Sur. Loc.

Humble No. 1 Riley Horton, 330 ft. from N line, 330 ft. from E line, sec. 40-18, T.&P. Sur. Tstg. 2,932 ft.; est. 500 B. P.D.

Humble No. 1 Dallas Joint Stock Land Bank, 990 ft. from W line, 4,458 ft. from S line of M. Fragosa Sur. 267. Drlg. 2,450 ft.

Iron Mountain No. 1 D. J. Herbst, 5 mi. E Hamlin, 330 ft. from N and E Sub 18, Austin Williams Sur. 339. Set 10-in. 2,245 ft.; wtr. 2,900-05 ft.; H.F.W. 3,150 ft.; S.D.O. 4,310 ft.

Chas. J. Kleiner No. 1 Mrs. A. E. Carlson, 333 ft from S and E lines, NW¼ sec. 19-3, H.&T.C. Sur. S.D.O. 3,301 ft.

F. W. Martin No. 1 B. N. Herndon, 330 ft. from S and W of NW sec. 1, M.E.&P. Sur. D.&A. 4,101 ft.

N. H. Martin & Son No. 1 J. W. Wyatt, 150 fr. S L, 316 fr. E L, W 102 ac. in sec. 4-14, T.&P. Sur. Loc.

Oil States Exploration No. 1 J. E. Sellers, 100 ft. from S line, 330 ft. from W line, S. Andrews Sur. 191, H.F.W. 1,785 ft.; S.S.O. 2,085-90 ft.; D.&A. 2,260 ft.

L. H. Pearson No. 1 B. L. Hood, 1,100 ft. from S and W lines, W. T. Evans Sur. No. 1. U.R. 1,705 ft.

S. B. Roberts Co. No. 1 Roy E. Prichard, 205 ft. fr. S L, 2,428 fr. E L, J. E. Cockrell Subdiv. 2, G. Martinez Sur. 195. Loc.

Shaheen Oil Co. No. 1 T. B. McCoy, 595 ft. from N line, 660 ft. from E line, sec.

(Continued on Page 111)

PERSONAL

F. S. HOLLANDS has been appointed acting traffic manager of the Standard Oil Company of Indiana with office at 910 South Michigan Avenue, Chicago.

J. V. McCONNELL, well-known oil man of Shreveport, retiring senior vice commander of the Louisiana Veterans of Foreign Wars, was elected department commander at the eighth annual encampment last week.

JOSEPH J. HEDRICK, Evanston, Ill., recently received the degree juris doctor from John Marshall Law School, Chicago. Mr. Hedrick, formerly in the legal department of the Empire companies, Bartlesville, Okla., is now general counsel for the Natural Gas Pipeline Company of America and the Texoma Natural Gas Company, Chicago.

B. B. SMITH, superintendent for Loffland Brothers Drilling Company in California, is touring the Canadian Rockies with MRS. SMITH and their two children.

REX TOWNSEND, general manager of the Texas Petroleum Company in Colombia, South America, returned to the United States recently accompanied by MRS. TOWNSEND.

DANNY DE PAOLO, of the Gilmore Oil Company, formerly sales representative in Los Angeles automobile row for the company, has been promoted to manager of lubricating oil sales for the northern California division. In his new post he will maintain offices in San Francisco.

D. M. SACHS, Oil City Pa., president of the National Transit Company, MRS. SACHS and MISS OLIVE JEAN SACHS are back from San Francisco, Calif., where Mr. Sachs attended the Rotary International Convention. They returned home by way of the Canadian Rockies, Banff, Lake Louise and Mount Ranier park.

T. F. THOMPSON, of the Union Oil Company of California, has been appointed division asphalt supervisor of the central division, and R. E. THORPE has been appointed division asphalt supervisor of the southern division. W. M. WEIR has been appointed general asphalt sales representative of head office fuel oil and asphalt sales.

J. S. LEACH, sales manager in the southern division for the Texas Company; CECIL HIGHTOWER, safety director of the United Gas Public Service Corporation, and R. B. ROAPER, safety director of the Humble Oil & Refining Company, all of Houston, Tex., are among the directors elected for the newly formed Texas Safety Council.

BERT F. ALLEN, superintendent of the Tulsa office of the Snowden & McSweeney Company, has been transferred to Fort Worth, Tex., where the general Mid-Continent offices of the organization are located. The Tulsa office has been consolidated with the Fort Worth office.

H. L. PATTON, wild-well fighter, went back and tamed a Coastal Louisiana gasser seven days after it took the lives of his brother, Will Patton, and Edward Richardson, member of the crew, and mangled his own right arm. Mr. Patton reported last week that the well, Texas No. 2-B State, in Vermilion Bay, was under control and that preparations were being made to kill the gas flow. The well fighter, veteran of many wild gassers and fires, directed the capping operations. His arm had been amputated.

GEORGE W. LaPEIRE, consulting petroleum engineer and geologist, has moved from Robinson, Ill., to San Antonio, Tex.

W. F. CLINGER, of Warren, Pa., was reelected president of the Pennsylvania Grade Crude Oil Association at its meeting in Oil City, Pa., last week. Other officers chosen were: OTTO WALCHLI, Wellsville, N. Y., and PARKER L. MELVIN, Bradford, Pa., vice presidents; JOHN A. BECK, Butler, Pa., recording secretary; SAMUEL MESSER, Oil City, treasurer; W. R. REITZ, Oil City, assistant treasurer; F. B. DOW, Washington, D. C., general counsel; J. H. MOORHEAD, Oil City, executive secretary, and S. A. HARTWELL, JR., Oil City, assistant secretary. JAMES BEGLEY, of Franklin, Pa., has joined the association staff. M. D. RITCHIE has taken the place of GEORGE L. DUKE, who resigned as representative in the metropolitan New York district. DANIEL A. BREENE has been recalled from Kansas City, Mo., to take over the Cleveland-Detroit area, formerly covered by Mr. Ritchie.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

The Standard Oil Company of Indiana has decided to build a refinery in Casper, Wyo. The company has purchased an 8-acre site paying $300 per acre. It is said that C. R. Manback will have charge of plant construction.

Gulfey & Gillespie open an office in the Hotel Tulsa in that city, and will be represented by E. W. McCrary, geologist, and Charles F. Farren.

Charles F. Wrightsman, of Tulsa, who recently sold his Hi-Grade Oil Company holdings to the Prairie Oil & Gas Company for $1,000,000, will move to San Francisco, Calif., which he intends to make his permanent residence.

P. J. White and H. F. Sinclair, well-known oil producers, have bought the Tulsa Street Railway system and plan to extend it into an interurban system.

20 YEARS AGO

The discovery of a deep sand in Okmulgee County, Oklahoma, which produces largely, has attracted many operators to that district. The pay is believed to be the Mounds sand, sometimes called the Wilcox.

Gibson, Zahnizer & Vincent (Cia Petrolera de Tepetate) have a 100,000-barrel well in the Tampico district.

A bill has passed the Louisiana assembly making gas companies common purchasers and forcing them to purchase the product of independent gas producers.

10 YEARS AGO

Standard Oil Company of Pennsylvania is organized to compete in the marketing with Atlantic Refining Company in the latter's territory. Grant McCargo is president of the new company.

R. S. Burdick, secretary and assistant treasurer of Humble Oil & Refining Company, dies in Houston, Tex.

Wilshire Oil Company opens production in a deep zone below the Meyer horizon in Santa Fe Springs, California.

Twenty representative oil stocks average $64.51 per share on the New York Stock Exchange.

E. E. FOGELSON, Texas oil man, was reported in New York last week to have purchased the race horse, Dauber, for $40,000.

W. R. GOODWIN, of the Standard Oil Company of Louisiana, has been transferred from Baton Rouge to New York, where he is to serve as assistant to J. R. SKEHAN, vice president of the company.

ROBERT L. JONES, geologist of the Cities Service Oil Company, Tyler, Tex., has been transferred to Houston as geologist in the Gulf Coast district to succeed ELTON RHINE, who recently resigned to join the Phillips Petroleum Company.

EDWIN R. CUMMINS, industrial relations manager for the Standard Oil Company of Brazil, left New York recently for Cuba. He came to the United States after a trip to London and while in this country visited his home in Clarksburg, W. Va.

PHILLIPS MAVERICK, consulting geologist and independent oil operator in San Angelo, Tex., has been made oil royalty and lease expert for the federal government and will be located in Fort Worth, Tex. Mr. Maverick has ended his partnership with W. M. HOLLAND, operating under the name of the Maverick Oil Company and Tex-Tor Oil Corporation.

JAMES M. SNOWDEN and MISS MARIE SPENCE KIELY, both of New York, are to be married, it was announced last week by the bride's parents, MR. and MRS. CHARLES F. KIELY. The date for the wedding was not named. Mr. Snowden is assistant general manager of the Snowden & McSweeney Company, New York, crude oil producer and natural gasoline manufacturer. He is a son of MRS. GEORGE GRANT SNOWDEN, of Philadelphia.

PARAGRAPHS

FERDINAND HEINE, independent oil man of Houston, Tex., has been visiting in Pennsylvania.

ALFRED HURLBURT and T. K. KNOW, vice presidents of the Republic Natural Gas Company; L. T. GOLDING, secretary-treasurer, and WILLIAM H. MILLER, assistant secretary, have moved from Corpus Christi, Tex., to Dallas, Tex., with the transfer of the company's headquarters to the latter city. WILLIAM H. WILDES, president, will move to Dallas from Chicago.

R. F. SCHROEDER has been made general sales manager of the Shell Oil Company, his promotion being one of several changes announced by L. G. McLAREN, who recently became vice president in charge of marketing on the Pacific Coast. P. J. PIEROTH was made assistant manager of the operations department; E. C. HARRISON was moved from head office sales representative to assistant general sales manager; E. R. RAPHAEL becomes division manager in Oakland, and R. D. STETSON manager of the service station department.

ROBERT H. COLLEY, president of the Atlantic Refining Company, was honored July 9 when a new tanker bearing his name was launched from the yards of the Sun Shipbuilding & Dry Dock Company, Chester, Pa. MRS. COLLEY was sponsor of the new vessel.

COL. WALTER B. PYRON, vice president of the Gulf Oil Corporation, Houston, Tex., has been designated by GOV. JAMES V. ALLRED as commanding officer of the Fifty-sixth Cavalry Brigade, Texas National Guard, during the 30 days' leave of absence granted the present commander, GEN. LOUIS S. DAVIDSON. At present he is commanding officer of the 112th Cavalry Regiment. The brigade will take part in the Third Army maneuvers at Camp Bullis, near San Antonio, beginning August 6.

GEORGE M. VANDAVEER, JR., petroleum engineer for E. H. Moore, Inc., Tulsa, has left that position, and it was said his plans for the future would be announced soon. Mr. Vandaveer went to the Moore organization from the Stanolind Oil & Gas Company two years ago.

W. E. HURD, Toronto, president of Homestead Oil & Gas, Ltd., of Canada, is in Fort Worth, Tex., planning a wildcatting program on the company's properties in the West Central Texas district. He is accompanied by HENRY BENSON, of New York, and W. RALPH SALTER, of Toronto, both officers in the company. W. M. HOLLAND and JACK TRACEY, both of San Angelo, Tex., president and secretary, respectively, of the Homestead Oil & Gas Company of Texas (an affiliated organization), joined the visitors while they were in Fort Worth.

O. M. PERRENOT has been named assistant general auditor of the Standard Oil Company of Indiana.

JULIUS FOHS, president of the Fohs Oil Company, Houston, Tex., accompanied by MRS. FOHS and their daughter, sailed last week on the Queen Mary for a vacation tour of Switzerland.

E. I. HANLON, chairman of the board of Hanlon-Buchanan, Inc., Tulsa, and chairman of the board of the National Bank of Tulsa, is on a vacation tour of Europe from which he will not return till fall. He wrote from Monte Carlo recently to friends in this country.

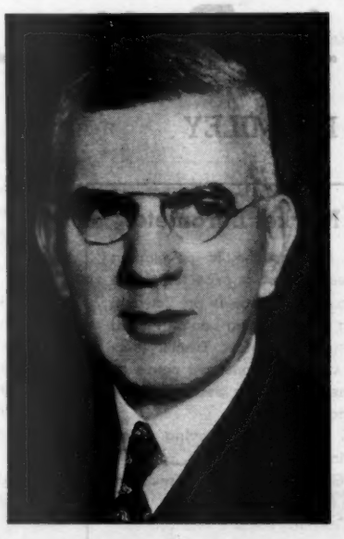
FUHRMAN UPDIKE, inspector for the California State Division of Oil and Gas at Bakersfield, accompanied by his family, is on vacation in Idaho, Oregon, and Utah, where he was formerly in the cattle business. FRED KASELINE, also of the division of oil and gas, has returned from a vacation spent at eastern points.

LOUIS F. CLARK, former sales promotion manager for the Arkansas Fuel Oil Company, Shreveport, La., has been named manager of the Arkansas division of the company, with offices in Little Rock. LESTER MOORE, advertising manager, has been placed in charge of sales promotion as head of the newly combined departments.

C. HALL MONTGOMERY, division geologist for the Continental Oil Company in Bakersfield, Calif., is participating in sailboat races at Huntington Lake, Calif., where, with his family, he is spending a vacation of several weeks. JOHN SANSONE, geologist at the Los Angeles headquarters of the company, is filling Mr. Montgomery's place during the latter's absence.

Look What They Sold

When George F. Smith, recently elected a vice president of the Continental Oil Company, entered its service 31 years ago sales efforts were directed mainly to kerosene, lubricating oil, and candles; but the line included stoves, lamps, and heaters too, the idea being to promote consumption of kerosene, the oil industry's chief product. For gasoline was a nuisance in those days.



GEORGE F. SMITH

Mr. Smith, born in Pittsburgh, Pa., in 1879, was secretary of the Iron City Tool Works there when, in 1904, he resigned and went West to recover his health. He joined Continental in Denver, Colo., in 1907, starting in the accounting department. In 1913 he was made assistant secretary, assistant treasurer, and a director. Six years later he was chosen secretary and treasurer.

When Continental and the Mutual Oil Company were united in 1924 Mr. Smith became a director and treasurer. Three years later he was elected secretary and treasurer. With the consolidation of Continental and the Marland Oil Company in 1929 Mr. Smith was made treasurer, which post he was holding when advanced to a vice presidency. Besides official positions in Continental subsidiaries, he is commissioner of finance in Ponca City, Okla., where he resides. He is a director in banking, royalty, and building and loan institutions. He is a member of several clubs and when he finds time he plays golf. He married Anna Marie Saint, of Pittsburgh, and they have two daughters.

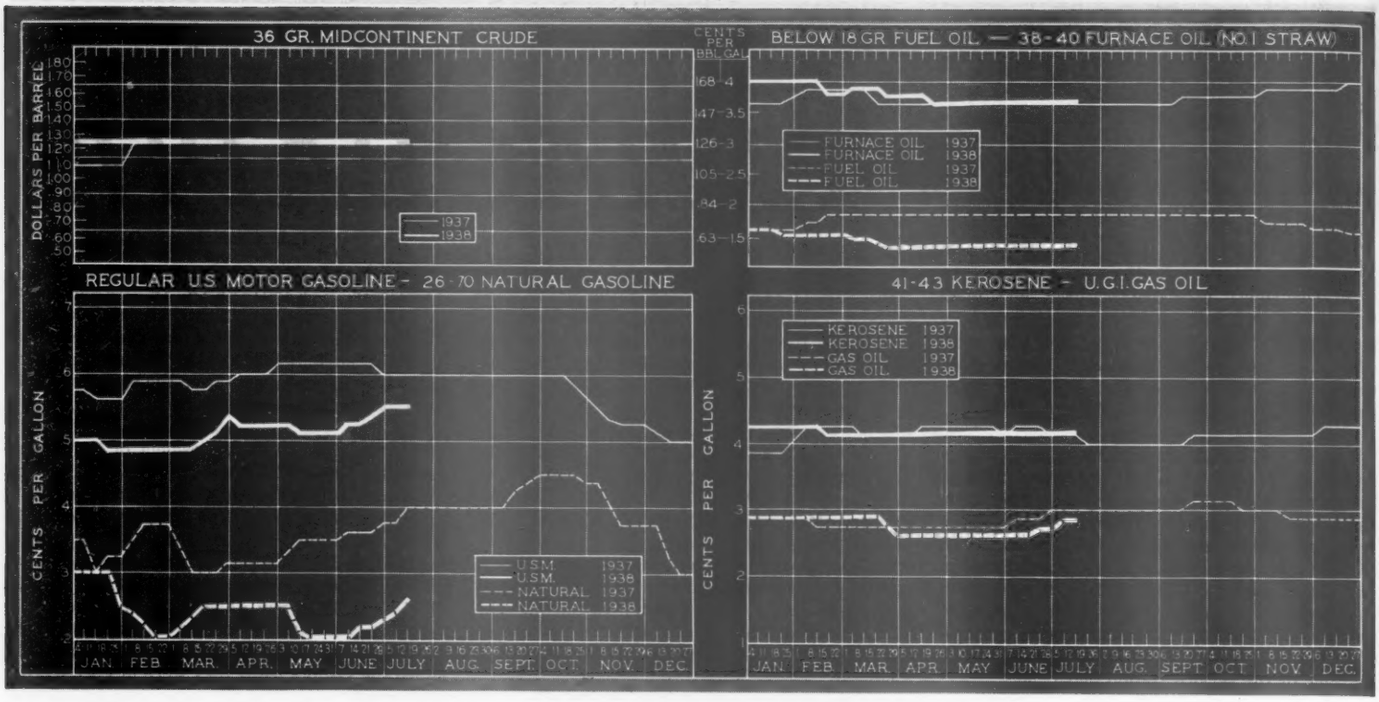
BEN E. PARSONS, assistant manager of production for the General Petroleum Corporation of California, has been elected vice president and placed in charge of the production department, succeeding W. L. McLAINE who recently retired after 37 years spent in the California oil industry.

JACK CHEVIGNY, former Notre Dame football star, is now an oil man. A well drilled by him in Wayne County, Illinois, came in last week under high gas pressure. Mr. Chevigny is a field representative for H. H. Weinert, Inc., of Seguin, Tex., on whose 800-acre tract the well was drilled.

Z. L. PHELPS, Bakersfield, Calif., has been made general manager of the newly formed Medford Oil Company which has started drilling on a 7,500-foot test at Coalinga, Calif., as a result of the recent deep-sand discovery made by Petroleum Securities' No. 2 Gatchell. The new company is headed by FRANK GOETZE, of Medford, Ore.

JOHN R. BURKE, land man for the Atlantic Refining Company, accompanied by MRS. BURKE and their daughter, MARY, left Tulsa last week for Montreal and Quebec. At Quebec they planned to stay at the Chateau Frontenac. Sailing from there on the Duchess of Atholl they will go to New York. The return trip will be made by way of Washington, D. C.

M. S. APP, for several years superintendent in the Bakersfield district for General Petroleum Corporation of California, has been elevated to acting general superintendent of the company. His headquarters will be in Los Angeles. R. R. SHINN, formerly superintendent at Taft, has been made superintendent of the entire San Joaquin Valley, and will retain his headquarters in Taft.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Natural Gasoline Stronger in Group 3 and Motor Fuel in Better Position

By T. F. SMILEY

Natural gasoline quotations worked up to higher levels in the Group 3 market in the past week. The 26-70 grade, which a week ago was selling at 2⅝ cents, was commanding a quarter-cent more this week. Observers said that the greater part of the sales were for short-haul shipment only, where the manufacturer was protected from outside competition by advantageous freight rates. For several days sales at the higher quotation were confined almost exclusively to these short hauls, so that the better prices were without much significance in the general market.

Buying for Storage

However, refiners so situated as to be able to take advantage of favorable freight rates were evidently interested in filling all their available storage with natural at the current low prices, and they bought so generously for fall blending that short-haul supplies soon were virtually exhausted. Buyers in need of natural then turned to distant manufacturers. Here too the supplies were limited, and purchases reported early this week were apparently all on the basis of 2⅝ cents, which became the ruling price generally.

Whether the gasoline market was marching confidently to higher ground or was taking time out for a rest depended upon who was doing the talking. There was nothing seriously wrong with it. All agreed to that. Some refiners expressed a little disappointment over the post-holiday business. There had been general expectation that rebuilding of stocks depleted by the Independence Day demands would prevent any interruption of the business stream. Although some sales managers asserted this expectation had been fulfilled, others commented, "It isn't quite what I was looking for."

Nothing that could be classified as distress gasoline was in evidence, though a few small refiners in scattered areas were reported to be offering minor concessions for quick movement. The extreme tightness which characterized the market last month had disappeared. Although consumption over the three-day week-end was heavy in districts favored by pleasant weather and dry roads, rains discouraged use of the car in wide areas in the North and Middle West, with the result that orders for replenishment of stocks fell short of expectations in some instances.

Refined Oil Market Barometer

Tourist demand for gasoline is developing steadily, and the present week is expected to see it in full swing. Record gallonage is predicted in some areas. Heating oils are being bought for fall storage, with some grades scarce. Tractor fuels are moving in large volume to consumer points as harvesting operations reach their peak. Natural gasoline is developing strength.

MID-CONTINENT. Gasoline improving. Naturals stronger. Heating oils in demand.

EAST COAST. Gasoline vigorous. Fresh interest shown in light fuels. Heavy fuel dull.

GULF COAST. Gasoline steady. Gas oils soft, with quotations lower.

CALIFORNIA. Gasoline firmer. Diesel weak. Fuel oil soft and irregular.

PENNSYLVANIA. Gasoline firm, prices stiffening. Lubricant outlook slightly better.

CHICAGO. Gasoline steady. Kerosene and tractor fuels firm. Heating oils rising.

The Other Side

In contrast with the disappointment voiced in certain cases were expressions of enthusiasm in others. "I've just been making a check-up," said one sales manager. "I find that in the last six days of June, when jobbers were busy stocking up, we shipped 758 cars of gasoline. That's a daily average of 126 cars. But beginning with July 5, with the Independence Day buying ended, we have shipped an average of 144 cars daily. That doesn't look as though business was slowing up, does it?"

Feeling seemed general that as tourist demand for gasoline gathers momentum something of the tightness which characterized the market in June is likely to reappear, with swelling gallonage.

Heating oils were moving in substantial volume to northern points, where jobbers are buying actively for storage. The No. 2 grade, both dark and straw, was in especially brisk demand.

The harvesting season, drawing substantially on low-octane gasoline and tractor fuels, including kerosene and light-gravity distillates, is now at its peak. In southern areas, where the first cutting of wheat was done, threshing operations now are under way. It is likely to be late August before harvesting work in northern regions is finished. Market observers point out that in addition to the products used as tractor fuels, regular-grade gasoline benefits in a marked degree, since a large amount of trucking is involved in transportation of crops.

Record Holiday Consumption Is Followed by Rush for Supply

By H. STANLEY NORMAN

NEW YORK, July 11.—Motor fuel consumption over the Fourth of July three-day week-end met the full expectations of refiners and dealers. From early reports it appears certain that gasoline consumption set an all-time peak for all Independence Day periods in history, and beyond any doubt fixed a new high for this season and year.

Dealers, jobbers and refiners were called upon to replenish stocks at terminals and in transit Tuesday to an extent indicating the record breaking proportions of motor fuel demand over the preceding week-end. Motor fuel prices displayed no change last week since they had been appreciated in anticipation of the Independence Day demand. Adjustments upward of a quarter to a full cent per gallon were made July 8 in the Standard Oil Co. of Louisiana territory in line with earlier advances in primary markets, in other eastern seaboard and near-Atlantic states.

Tankcar prices for 65-octane, unleaded gasoline remained at a range of 6¾ to 7 cents per gallon in New York and New Jersey. The only change indicated from the preceding week was found in a greater number of dealers asking top of the range. Retail markets in New York remain unsettled with frequent signs offering 5 and 6 gallons of regular gasoline for 90 cents.

The price warfare in metropolitan New York has received official attention of the City Council which is now considering a plan for licensing retail outlets. The bill proposed to the City Council by two of its members would require the posting of retail prices, and would prohibit misbranding and adulteration of gasoline. There are approximately 6,000 retail outlets in the city which would be affected by the measure, which imposes stiff penalties for noncompliance. The council will consider the bill designed to prohibit sales frauds at conclusion of the summer recess.

Improvement of the New York tankcar gasoline market is a reflection of the advances made by the primary markets on the Gulf Coast and at inland refining centers. Tightness of the high-octane motor fuel market is growing more intense each week, according to reports reaching New York and some buyers are having difficulty in locating supplies.

The reduction of 3,842,000 bbls. in stocks of motor fuel during the two weeks ended July 2 coupled with continuation of the conservative refinery operating level has narrowed the sources of abundant gasoline supplies to a point where it is now necessary for purchasers to shop around for their replacement requirements. The Gulf Coast market for minimum 65-octane gasoline appears firm at 5½ to 5⅝ cents, with the trend to the higher figure.

For the first time in several weeks fuel oils appear to be at least holding their ground, with some trade factors talking in bullish terms. There has been an apparent check in the drift of heavy fuel oil and No. 2 fuel oil is reported held by most Gulf Coast refiners at 3½ cents. Interruption of the summer drift to lower prices and frequent reports of price shading to push sales is partially explained by the more optimistic business outlook and the prospects for further improvement in the fall. Then, too, several dealers, particularly those in upstate New York and in other inland points served by the inland waterways open for only a few months in the summer are actively laying in next winter's requirements. This stimulant to fuel oil business has been an important factor in checking the drift which continued unabated all summer until last week. There is still considerable competitive selling in the fuel oil retail field where next winter's contracts are now being written, but even in this field prices have stiffened somewhat over the past few weeks.

Socony-Vacuum Oil Co., Inc., raised tankcar and tank-wagon gasoline prices from three-tenths to one-half of a cent at Buffalo, Rochester and Syracuse late in June at about the time the New York tankcar market moved forward a quarter of a cent. The new prices in the upstate cities are firmly established and have been met by a majority of sellers.

First sustained warm weather of the summer set in July 4 and prevailed most of the week, giving indications that another week-end of heavy travel is in prospect for refiners, jobbers and dealers. The Independence Day week-end was not particularly warm, but the cooling breezes were especially inducive to automobile travel. The beaches and summer resorts were not particularly popular this Independence Day since the atmosphere was too cool for comfortable bathing, but this accrued to the advantage of the oil industry since more drivers were content to take long automobile trips.

The improvement in fuel oil volume of business and a check of price reductions is attributed to two other factors, one of which has no direct connection with the oil industry. There has been growing talk of inflation, with prospects of higher prices for commodities. This talk of inflation has filtered into the ranks of dealers and jobbers, prompting many to make an earlier than usual start in lining up their fuel oil supplies for the early fall months. Then, too, there is the attitude found in numerous quarters that fuel oil has suffered unduly from the recession and that prices are probably touching bottom at the moment. With interest in fuel oils beginning to assert itself, some market observers are inclined to discount the increase of light fuel oil stocks this year over 1937, pointing out that the winter of 1937-38 was abnormally mild in the northeast, which is the chief consuming area.

Supplies of No. 2 fuel oil can be obtained in New York's tankcar market on firm bid of 4 to 4⅛ cents per gallon, but some suppliers are holding their quotations steady at

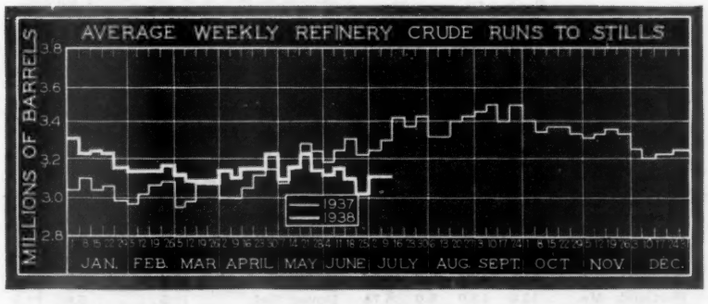
(Continued on Page 104)

A. P. I. Weekly Refinery Statistics

Week Ending July 9, 1938

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	450,000	22,074,000	12,720,000
Appalachian	88.4	102,000	3,114,000	1,158,000
Indiana, Illinois, and Kentucky	92.4	415,000	13,278,000	8,942,000
Oklahoma, Kansas, and Missouri	84.7	280,000	6,928,000	4,156,000
Inland Texas	56.6	140,000	2,149,000	1,785,000
Texas Gulf	95.7	717,000	9,982,000	11,505,000
Louisiana Gulf	96.6	117,000	2,476,000	3,435,000
North Louisiana and Arkansas	63.7	35,000	504,000	766,000
Rocky Mountains	69.7	58,000	1,912,000	927,000
California	90.9	469,000	13,366,000	92,343,000
Total reported	89.0	2,783,000	75,783,000	137,737,000
Estimated unreported	.....	312,000	4,110,000	2,850,000
*Estimated total	.....	3,095,000	79,893,000	140,587,000
*Estimated total, previous week	.....	3,095,000	80,634,000	138,903,000
*July 10, 1937	.....	3,325,000	73,976,000	103,537,000

*Bureau of Mines, currently estimated.



Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATES)

Week ending June 25, 1938	293,463,000 barrels
Week ending June 18, 1938	295,931,000 barrels
Week ending June 26, 1937	308,709,000 barrels

Figures for June 25 and June 18 do not include stocks of heavy, unrefinable California crude which were 17,626,000 bbls. and 17,652,000 bbls., respectively. Figures on heavy crude for year ago not available.

Retail Oil Markets

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of July 12, 1938

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas lower grades and a premium grade also are available.

Standard Oil Co. (Indiana)

	Gasoline Tank wag.	Gasoline Dlr.	Gasoline Inc. tax	Kero. tank wag.
Chicago, Ill.	15.6	13.6	4.0	10.5
Decatur	15.6	14.1	4.0	10.5
Joliet	15.6	14.1	4.0	10.5
Peoria	15.6	14.1	4.0	10.5
Quincy	15.4	13.9	4.0	10.3
Davenport, Ia.	15.6	14.1	4.0	‡10.5
Des Moines	15.4	13.9	4.0	‡10.3
Mason City	15.8	14.3	4.0	‡10.7
Duluth, Minn.	17.4	15.9	5.0	11.3
Mankato	17.0	15.5	5.0	10.9
Minneapolis	17.0	15.5	5.0	10.9
LaCrosse, Wis.	17.0	15.5	5.0	10.9
Green Bay	17.4	15.9	5.0	11.3
Milwaukee	16.8	15.3	5.0	10.7
Detroit, Mich.	15.3	13.8	4.0	9.0
Grand Rapids	14.8	13.8	4.0	9.?
Saginaw	16.3	14.8	4.0	9.3
Evansville, Ind.	17.1	15.6	5.0	†11.0
Indianapolis	17.3	15.8	5.0	†11.2
South Bend	17.6	16.1	5.0	†11.5
Fargo, N. Dak.	17.2	15.7	4.0	12.1
Minot	18.5	17.0	4.0	13.4
Huron, S. Dak.	17.5	16.0	5.0	11.4
Kans. City, Mo.*	14.9	13.4	4.0	9.8
St. Louis*	15.2	13.7	4.0	10.1
St. Joseph*	14.9	13.4	4.0	9.8
Wichita, Kans.	14.4	10.6	4.0	7.8

***State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Does not include 3-cent state tax.**

Exclusive of state general sales taxes.

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective Dec. 7, 1936, f.o.b. Chicago tank-wagon prices: Range oil, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.3 cents. Stanolex No. 1, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7 cents. Stanolex furnace oil. 1-149 gallons, 7.8 cents; 150 gallons and over 7 cents; Stanolex A, 1-399 gallons, 5.75 cents; 400 gallons and over, 4.75 cents Stanolex B, 1-799 gallons, 5.75 cents; 800 gallons and over, 4.75 cents.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline Tank-wag. dlr.	Gasoline Tank-car con'r.	Gasoline Inc. tax	Kero. tank-wag.
Atl'tic City, N. J.	13.4	11.4	4.0	8.0
Newark	13.4	11.4	4.0	8.0
Annapolis, Md.	14.85	13.35	5.0	9.5
Baltimore	14.25	12.75	5.0	9.0
Cumberland	16.65	14.15	5.0	10.0
Wash'g'n, D. C.	12.5	11.0	3.0	9.5
Danville, Va.	16.95	14.45	6.0	12.9
Norfolk	15.75	13.25	6.0	11.5
Petersburg	16.05	13.55	6.0	11.7
Richmond	16.05	13.55	6.0	11.7
Roanoke	17.25	14.75	6.0	12.8
Charles'n, W. V.	17.05	14.55	6.0	12.6
Parkersburg	15.35	13.85	6.0	11.2
Wheeling	16.25	14.85	6.0	12.2
Charlotte, N. C.	18.65	16.15	7.0	12.1
Hickory	19.15	16.65	7.0	12.5
Mt Airy	18.95	16.45	7.0	12.3
Raleigh	18.25	15.75	7.0	11.6
Salisbury	18.75	16.25	7.0	12.2
Charleston, S. C.	17.25	14.75	7.0	10.6
Columbia	18.25	15.75	7.0	11.6
Spartanburg	18.95	16.45	7.0	12.4

Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tankcar price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5 cent per gallon.

Effective May 15, 1937, in North and South Carolina, West Virginia and Virginia (except Arlington and Fairfax counties): Commercial consumers taking deliveries of 50 gallons (W. Va., 100 gallons) or more at one time will be billed at posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons (W. Va., 100 gallons) will be billed at 4 cents per gallon over posted consumer tank-wagon price. Generally the posted consumer tank-wagon price will be the equivalent to the dealer price less .5 cent per gallon.

Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline Tank-wag.	Gasoline Net dlr.	Gasoline Inc tax	Kero. tank-wag
Atlanta, Ga.	20.0	17.0	7.0	*12.0
Augusta	21.0	18.5	7.0	11.5
Macon	21.0	18.5	7.0	12.0
Savannah	20.0	17.0	7.0	*12.0
Birm'ham, Ala.	21.5	18.5	8.0	12.0
Mobile	22.0	19.0	9.0	11.0
Montgomery	21.5	19.5	9.0	13.0
Jackson, Miss.	20.0	17.0	7.0	10.0
Vicksburg	20.0	17.0	7.0	10.0
Jacks'ville, Fla.	20.5	17.5	8.0	8.0
Miami	21.0	18.0	8.0	11.0
Pensacola	22.5	19.5	9.0	12.0
Tampa	20.0	17.0	8.0	10.5
Lexington, Ky.	20.0	17.0	6.0	10.5
Covington	18.0	15.0	6.0	10.5
Louisville	19.0	16.0	6.0	10.0
Paducah	19.5	16.5	6.0	10.0

***Includes 1-cent state tax.**

Price basis to tank-wagon consumers: Effective January 4, 1937, 3 cents per gallon below tank-wagon price. Effective June 4, 1938, 2 cents per gallon discount eliminated from all kerosene markets in Mississippi, Alabama, Georgia, and Florida, markets being reduced correspondingly to a net basis.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham Ala., has a city gasoline tax of 1 cent per gallon; Pensacola has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline Dealer	Gasoline Inc. tax	Kero. tank-wag.
Denver, Colo.	14.0	5.0	11.5
Grand Junction	19.0	5.0	15.0
Pueblo	16.5	5.0	10.5
Casper, Wyo.	17.0	5.0	11.5
Cheyenne	13.0	5.0	13.0
Butte, Mont.	19.5	6.0	15.5
Billings	19.5	6.0	13.0
Helena	20.0	6.0	15.5
Great Falls	19.0	6.0	15.5
Salt Lake City, Utah	18.0	5.0	16.0
Twin Falls, Ida.	21.0	6.0	18.0
Boise	21.5	6.0	18.0
Albuquerque, N. M.	17.5	*6.5	12.0

***Includes city tax of one-half cent.**

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline Tank-wag. con'r.	Gasoline Dlvided dlr.	Gasoline Inc. tax	Kero tank-wag.
Ohio points	16.5	15.5	5.0	*13.0

***Includes state tax of 1 cent.**

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline Tank-wag.	Gasoline Tank-car	Gasoline Inc. tax	Kero tank wag.
Albany, N. Y	14.5	12.5	5.0	9.0
*Met. N. Y.:				
M'htt'n, Br'nx	14.0	12.5	5.0	8.75
Staten Island	14.0	12.5	5.0	8.75
Q'ns & Bklyn.	14.0	12.5	5.0	8.75
Buffalo	14.5	13.4	5.0	7.5
Rochester	15.3	13.5	5.0	8.5
Syracuse	14.9	13.4	5.0	9.0
Boston, Mass.	13.0	12.0	4.0	8.5
Portland, Me.	15.0	13.0	5.0	8.75
Manch'ter, N.H.	15.0	13.6	5.0	9.0
Burlington, Vt.	15.4	13.4	5.0	9.5

***Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes. Metropolitan New York prices are undivided dealer prices; others are split dealer.**

Price basis to undivided dealer: Posted dealer tank-wagon price less .5 cent. Price basis to commercial consumer: Effective Nov. 15, 1936, monthly purchases of 25,000 gallons and over, consumer tankcar prices at delivery point plus .5 cent per gallon; monthly purchases of 5,000 to 25,000 gallons, undivided dealer price at delivery point; monthly purchases under 5,000 gallons, pay divided dealer tank-wagon prices at delivery point.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline Tank-wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
San Francisco	17.5	18.5	4.0	11.5
Los Angeles	17.0	18.0	4.0	10.0
Fresno, Calif.	18.5	19.5	4.0	12.5
Phoenix, Ariz.	21.5	22.5	6.0	*17.5
Reno, Nav.	20.5	21.5	5.0	13.5
Portland, Ore.	20.0	21.0	6.0	13.5
Seattle, Wash.	20.0	21.0	6.0	13.5
Spokane	23.0	24.0	6.0	16.5
Tacoma	20.0	21.0	6.0	13.5

***Includes 5-cent state tax.**

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial consumers: on tank-wagon price: on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline Tank wag.	Gasoline Dlr.	Gasoline Inc. tax	Kero. tank-wag.
Omaha	18.0	16.5	6.0	10.8
McCook	18.7	16.5	6.0	10.5
Norfolk	18.4	16.9	6.0	11.2
North Platte	18.4	15.4	6.0	11.0
Scotts Bluff	19.5	15.0	6.0	12.3

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective Jan. 1, 1935.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline Tank-wag. dlr.	Gasoline Tank-car con'r.	Gasoline Inc. tax	Kero. tank-wag.
N. Oleans, La.	19.75	17.25	*10.0	†12.0
Baton Rouge	17.75	15.25	8.0	12.0
Alexandria	17.75	15.25	8.0	10.5
Lafayette	18.0	15.5	8.0	12.5
Lake Charles	17.75	15.25	8.0	12.5
Shreveport	16.5	14.0	8.0	9.5
Kn'ville, Tenn.	21.0	18.5	8.0	14.0
Memphis	19.0	16.5	8.0	12.0
Chattanooga	20.5	18.0	8.0	13.5
Nashville	20.0	17.5	8.0	10.5
Bristol	21.25	18.75	8.0	14.5

***Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax.**

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gallons or more in one delivery takes posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Louisiana kerosene prices include 1-cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline Tank-wag. dlr.	Gasoline Tank-car con'r.	Gasoline Inc. tax	Kero tank-wag.
Philadelphia, Pa.	13.75	12.25	5.0	10.0
Pittsburgh	15.0	13.0	5.0	10.5
Allentown	14.25	12.75	5.0	10.5
Erie	14.5	13.0	5.0	10.0
Scranton	14.5	13.0	5.0	10.5
Altoona	15.0	13.0	5.0	10.5
Dover, Del.	13.5	....	5.0	10.5
Wilmington	12.5	....	5.0	9.75
Springf'd, Mass.	13.5	....	4.0	8.0
Worcester	13.0	....	4.0	8.5
Hartford, Conn	13.6	....	4.0	7.0
New Haven	13.5	....	4.0	7.0
Providence, R. I.	13.0	....	4.0	8.0

Price basis to undivided dealers, dealer tank-wagon price less .5 cent per gallon. Price basis to commercial consumers in Pennsylvania and Delaware, effective March 11, 1937: Consumers under contract using 100,000 gallons or more per year full compartment hose deliveries, tankcar plus .5 cent. Consumers under contract using less than 100,000 gallons per year compartment hose deliveries, undivided dealer price. Consumers under contract less than full compartment delivery, consumers not under contract, less than full compartment delivery, and consumers not under contract full compartment delivery, divided dealer price. Less than 25 gallons, tank-wagon delivery, 4 cents per gallon above undivided dealer price.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline Dealer	Gasoline Inc. tax	Kero. tank-wag.
Muskogee, Okla.	14.5	5.0	7.0
Oklahoma City	13.5	5.0	7.0
Tulsa	14.0	5.0	6.0
Ft. Smith, Ark.	14.25	5.0	7.5
Little Rock	16.75	7.5	8.0
Texarkana	14.0	5.0	8.0

Texas

	Gasoline Tank-wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank wag.
Dallas, Tex.	14.0	18.0	5.0	8.0
Fort Worth	14.0	18.0	5.0	8.0
Houston	14.5	19.0	5.0	8.0
San Antonio	13.5	17.5	5.0	8.0

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

***Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.**

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gallon lots if covered by contract.

Canada*

3-Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank-wag.	Inc. tax	Kero. tank-wag.
Halifax, N. S.	24.5	10.0	18.5
St. John, N. B.	24.5	10.0	18.5
Montreal, Que.	21.0	6.0	17.5
Toronto, Ont.	22.0	6.0	17.0
Hamilton, Ont.	22.0	6.0	17.0
Winnipeg, Man.	27.5	7.0	20.7
Brandon, Man.	28.1	7.0	22.8
Regina, Sask.	26.0	7.0	22.0
Saskatoon, Sask.	28.3	7.0	24.9
Edmonton, Alta.	26.5	7.0	21.5
Calgary, Alta	23.5	7.0	19.0
Vancouver, B. C.	23.0	7.0	23.0

***Imperial gallon used in Canada.**

Divided dealers pay tank-wagon price. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Retail Price Changes

Standard Oil Co. (Indiana) June 30 reduced dealer gasoline 1 cent in Wichita.

Socony-Vacuum Oil Co., Inc., June 28 advanced tank-wagon gasoline .5 cent and tankcar gasoline .4 cent in Buffalo, advanced tank-wagon and tankcar gasoline .3 cent in Rochester, and advanced tank-wagon gasoline .4 cent and tankcar gasoline .3 cent in Syracuse.

Standard Oil Co. of Nebraska July 1 reduced dealer gasoline 1.4 cents and tank-wagon kerosene .6 cent in North Platte; July 2 reduced tank-wagon gasoline .4 cent and dealer gasoline an additional .5 cent at North Platte; July 2 reduced dealer gasoline 3 cents at Scotts Bluff.

Standard Oil Co. of Louisiana July 8 adjusted prices in its territory as follows: Advanced dealer and tankcar gasoline .75 cent at New Orleans and Baton Rouge, .25 cent at Alexandria, and 1 cent at Knoxville, Memphis and Chattanooga; reduced dealer and tankcar gasoline .25 cent at Lake Charles; July 6 advanced tankcar and dealer gasoline 1 cent at Nashville.

New York Market

(Continued from Page 103)

4¼ cents to 4⅝ cents per gallon for this material.

Bunker C fuel oil is reported unchanged at 95 cents per barrel in New York with this product lacking any particular feature. The Gulf Coast market for Bunker C fuel oil has stiffened somewhat during the past few days, but still lacks any real life.

Prices of Refined Products

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of July 12, 1938

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 oct. and below	.04¾	.04⅞
63-66 octane	.05	.05⅛
67-69 octane	.05¼	.05⅜
70-72 octane (regular)	.05½	.05⅝
60-62 400 grades:		
62 oct. and below	.04¾	.04⅞
63-66 octane	.05	.05⅛
67-69 octane	.05¼	.05⅜
70-72 octane (regular)	.05½	.05⅝
64-66 375	.04⅞	.05
68-70 360	.05⅛	.05¼

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.04¾	.04⅞
63-66 octane	.05	.05⅛
67-69 octane	.05¼	.05⅜
70-72 octane (regular)	.05½	.05⅝
60-62 400	.04¾	.04⅞
64-66 375	.04⅞	.05

NORTH LOUISIANA (Ark. and N. La. delivery)—

U. S. Motor grades:		
62 octane and below	.04⅝	.04¾
63-66 octane	.05	.05⅛
67-69 octane	.05¼	.05⅜
70-72 octane (regular)		.05⅝

ARKANSAS (Ark. and N. La. del.)—

U. S. Motor grades:		
62 octane and below		.04¾
67-69 octane		.05¼

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.04¾	.04⅞
63-66 octane	.05	.05⅛
67-69 octane	.05¼	.05⅜
70-72 octane (regular)	.05½	.05⅝
60-62 400 grades:		
62 octane and below	.04¾	.04⅞
63-66 octane	.05	.05⅛
67-69 octane	.05¼	.05⅜
70-72 octane (regular)	.05½	.05⅝
64-66 375	.04¾	.05
68-70 360	.05	.05¼

PENNSYLVANIA (Inland refineries)—

58-60 U. S. Motor:		
Below 60 octane		.05¼
65 octane	.06½	.06¾
68-70 octane	.07	.07¼

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07	.08¼
58-60 400, 65 oct. and higher	.08	.09

EAST COAST (domestic)—

U. S. Motor, 60-64.9 octane:		
New York (Bayonne)	.06¼	.06½
Philadelphia	.06¼	.06½
Boston	.06½	.06⅝
Baltimore	.06½	.06⅝
Charleston, S. C.	.07	.07¼
U. S. Motor, 65 and above:		
*New York (Bayonne)	.06¾	.07
Philadelphia	.06¾	.07
Boston	.06¾	.07
Baltimore	.06¾	.07¼
Charleston, S. C.	.07¼	.07½

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05	.05½
60-64.9	.05½	.05¼
65 octane and higher	.05⅝	.05½
68-70	.05¾	.06

Naphtha

PENNSYLVANIA (Inland refineries)—

52-56 450 (blending)	.04¾	.05

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70	.02⅝
Grade 18-55	.03⅛

NORTH TEXAS—

Grade 26-70	.02½
Grade 18-55	.03

CALIFORNIA—

75-85 375-390	.06½	.07

NORTH LOUISIANA (Ark. and N. La. delivery)—

Grade 26-70	.02⅞

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110 flash, 540-550 e.p.	.04	.04¼
41-43 gr., 300-520 i.b.p., 110-125 flash, 500-520 e.p.	.04¼	.04½
46-48 gr., 210-230 i.b.p., 480 max., e.p.	.04⅝	.04⅞

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.04⅛	.04⅜
42-44	.04⅜	.04⅝

NORTH TEXAS—

41-43	.04⅛	.04⅜

NORTH LOUISIANA (Ark. and N. La. delivery)—

41-43	.04⅛	.04⅜

ARKANSAS (Ark. and N. La. del.)—

41-43	.04½	.04⅝

PENNSYLVANIA (Inland refineries)—

45	.05
46	.05½
47	.05¾

CHICAGO (Based on Group 3)—

41-43	.04⅛	.04⅜
42-44	.04½	.04⅝

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.05	.06

NEW YORK (Bayonne, N. J.)—

41-43	.04⅝	.04¾

***GULF COAST (domestic)—**

41-43	.03⅞	.04

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

Range oil	.03⅞	.04
No. 1 prime white, 38-42	.03¾	.03⅞
No. 1 straw, 38-40	.03⅝	.03¾
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03⅜	.03½
No. 3 zero to 15, 28-32	.03¼	.03⅜
No. 3, 15 and above, 28-32	.02⅞	.03

NORTH TEXAS—

No. 1 prime white, 38-42	.03¾	.03⅞
No. 1 straw, 38-40	.03⅝	.03¾

NORTH LOUISIANA (Ark. and N. La. delivery)—

No. 2, 32-36	.03¼	.03½

ARKANSAS (Ark. and N. La. del.)—

No. 2, 32-36	.03½	.03⅝

CHICAGO (Based on Group 3)—

Range oil	.03⅞	.04⅛
No. 1 prime white, 38-40	.03¾	.04
No. 1 straw, 38-40	.03⅝	.03⅞
No. 2 straw, 32-36	.03½	.03¾
No. 2 dark, 32-36	.03¼	.03½
No. 3, zero to 15, 28-32	.03¼	.03⅜
No. 3, 15 and above, 28-32	.02⅞	.03

NEW YORK (Bayonne, N. J.)—

*No. 1	.04½	.04⅝
*No. 2		.04
*No. 4		.04

*Barge deliveries one-eighth to one-fourth cent under above tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal.; fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02⅞	.03
No. 4, low cold test, 24-28	1.00	1.10
No. 4, 15 and above, 24-28	.85	.90
No. 5, low cold test, 18-22	.70	.75
Below 18 fuel oil, industrial	.55	.60

NORTH TEXAS—

U.G.I. gas oil	.02⅞	.03
No. 4, low cold test, 24-28	1.00	1.10
No. 5, low cold test, 18-22	.70	.75
Below 18 fuel oil, industrial	.55	.60

NORTH LOUISIANA (Ark. and N. La. delivery)—

10-14 fuel oil, industrial	.80

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02¾	.02⅞
No. 4, low cold test, 24-28	1.00	1.10
No. 4, 15 and above, 24-28	.85	.95
No. 5, low cold test, 18-22	.70	.80
No. 5, 15 and above, 18-22	.60	.70
No. 6, low cold test, 10-16	.60	.70
No. 6, 15 and above, 10-16	.35	.45

PENNSYLVANIA (inland refineries)—

36-40	.03½	.04

CALIFORNIA—

Los Angeles:		
30-40 gas oil, per bbl.	1.20	1.40
24 plus diesel, per bbl.	1.10	1.40
24 plus diesel (bunkers)	1.25	1.55
12-16 (bunkers at tidewater)	.80	.90
10-16 (cargo lots)	.65	.85
12-17 (tankcars)	.60	.90
10-17 (high sulfur)	.55	.85
San Joaquin Valley:		
10-18 (tankcars)	.60	.80
24 plus diesel, per bbl.	1.20	1.50
San Francisco:		
24 plus diesel, per bbl.	1.45	1.55
24 plus diesel (bunkers)	1.50	1.55
10-16 (bunkers)		.95

GULF COAST—

No. 2 fuel		.03½
43-47 diesel		.03½
48-52 diesel	.03½	.03⅝
53-57 diesel	.03⅝	.03¾
Bunkers (bulk cargoes)	.65	.70
Bunker C (bunkers)		.75

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04¼
28-30 diesel (lighterage 6¼c per bbl.)		1.75
28-30 diesel (tankers)	.04¼	.04½
Bunker C (to ocean-going ships in N. Y. harbor)		.95
Industrial fuel (tankcars)	.04	.04¼

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

190-200 D, 15-25		.19
150-160 D, 0-10	.14½	.16
150-160 D, 15-25	.13½	.15½
150-160 E, 15-25	.13	.15
100-110 D, 0-10		.14½
Steam refined:		
631 green (treated)		.12½
600 dark green (untreated)		.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 140-150 at 210, 545-550 flash):		
10 poun test	.15	.15½
15 pour test	.14	.14½
20 pour test	.13	.13½
25 pour test	.12	.12½
Steam refined:		
600	.08½	.09
650	.10½	.11½
600 Pennsylvania flash	.11	.13
630 flash	.14	.15
600 Warren E filtered	.13	.14

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:		
150-3		.09
180-3		.10
180-4		.09½
200-3		.10½
200-4		.10
250-3		.11½
250-4		.11
280-3		.12½
280-4		.12
300-3½		.13
400-3½		.14
100-2½ paraffin oil		.06
15-20 Cold Test:		
200-3		.10
200-4		.09½
250-3		.11
250-4		.10½
280-3		.12
280-4		.11½

GULF COAST—

Pale Oils:		
200-3	.07	.07¼
300-3	.07½	.07¾
500-3½	.08½	.08¾
750-3½	.08¾	.09⅛
1,200-3½	.09½	.09¾
1,500-4	.09¾	.10
Red Oils:		
200-5-6	.07¼	.07½
300-5-6	.07¾	.07½
500-5-6	.08	.08½
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)—

Pale Oils:		
100-2½-3	.07¼	.08
200-2½-3	.07¼	.08
300-2½-3	.07¼	.08
400-3-4	.07¼	.08
450-3-4	.07¼	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red Oils:		
200-4-5	.07¼	.08
300-5-6	.07¼	.08
350-5-6	.09¼	.11½
400-5-6	.09¼	.11½
450-5-6	.09¼	.11½
500-5-6	.09¼	.11½
600-5-6½	.09¼	.11½
700-6½ plus	.09¼	.11½
750-6½ plus	.09¼	.11½
900-6½ plus	.09¼	.11½

PENNSYLVANIA—

150 vis. at 70° color, 400-405 flash:		
Zero pour test	.13½	.14
10 pour test	.12½	.13
15 pour test	.12	.12½
25 pour test	.11	.11½
180 vis. at 70° F., 3 color:		
25 pour test	.13	.13¼
200 vis. at 70° F., 3 color:		
Zero pour test	.14½	.15
10 pour test	.13½	.14
15 pour test	.13	.13½
25 pour test	.12	.12½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02¼	.02½

PENNSYLVANIA (Inland refineries)—

122-124 (a.m.p.) w.c. scale	.0210	.0220
124-126 (a.m.p.) w.c. scale	.0210	.0220

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0420
125-127 (a.m.p.) wax		.0435
128-130 (a.m.p.) wax		.0445
130-132 (a.m.p.) wax		.0455
133-135 (a.m.p.) wax		.0500
135-137 (a.m.p.) wax		.0515
124-126 (a.m.p.) w.s.		.0185
124-126 (a.m.p.) y.s.		.0185
Petrolatum in barrels, carload lots:		
Dark green	.02	.02¼
Amber	.02⅜	.02½
Extra amber	.02⅝	.02¾
Lily white	.05¼	.05¼
Snow white	.06¼	.06¼
Cream	.04½	.04¼

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.05
60-62 400	.05	.05⅛
61-63 390	.05⅛	.05¼
64-66 375		.05½

LOS ANGELES—

U. S. Motor grades:		
55-65 octane	.05¼	.05½
65-69 octane		.05¾
Above 69 octane		.06

KEROSENE

GULF COAST—

41-43 prime white	.03⅞	.04
41-43 water white	.03⅞	.04

LOS ANGELES—

41-43 water white	.05	.05¼

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.b. in bbls.)—

Cylinder Stocks:		
600 Warren E	.15	.15½
600 S.R. unfiltered	.16	.16½
630 S.R. unfiltered	.17	.17½
600 flash, S.R.	.17	.17½
630 flash, S.R.	.20½	.21
Bright Stocks:		
8 color	.16¼	.16½

NEUTRAL OIL

200-3 color	.21½	.22
150-3 color	.19½	.20

PARAFFIN WAX

NEW YORK (prices per pound)—

123-126 a.m.p.		.0375
125-127 a.m.p.		.0387
128-130 a.m.p.		.0412
133-135 a.m.p.		.0437
135-137 a.m.p.		.0455
Crude Scale:		
124-126 w.s.	.0185	.0200
124-126 y.s.	.0185	.0200

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

(Effective January 28, 1937)

East Texas (May 22, 1937)*	$1.35
Van, Tex.†	1.10
Camp Hill, Tex.	1.27
Cass County, Tex.‡	1.25
Talco	.73
Altus and Tipton, Okla.§	1.20
Other fields (see gravity table).	

*All companies. †Humble Oil & Refining Co.; Pure Oil Co. ‡Texas Co. §Gulf Oil Co. Talco by Humble Oil & Refining Co.

North Louisiana and Arkansas

Smackover, all grades	$ .90
Tullos and Urania	1.02
El Dorado East field	.90
Union County, Ark.	.90
Ouachita County, Ark.	.90
Lisbon, La. (Dec. 13, 1937)*	.98

*Caddo Crude Oil Purchasing Co.

Gulf Coast

(Effective January 28, 1937)

Choctaw and Darrow, La. See note below	
Clay Creek, Tex.	$1.00
Garden Island, La.	1.37
Cleveland, Tex.	1.27
Hardin, Tex.	1.15
Lafitte, La.	1.24
Livingston, Tex.	1.27
Welah, La.	.98
Tepetate (La.) (Jan. 28, 1937)	1.24

Duval, Jim Hogg, Webb and Zapata counties, Texas, and Heyser and Placedo fields take Mirando gravity prices. Jennings, La., 5 cents lower than Gulf Coast prices on each degree. Segno, Texas, takes Gulf Refining Co.'s Gulf Coast prices. Choctaw and Darrow, Louisiana, posted for first time by Standard Oil Co. of Louisiana, start below 21 degrees at 90 cents, with 3-cent differential up to 25 gravity, then 2-cent differential up to 40 and above, $1.36. Effective October 1, 1937, Stanolind Oil & Gas Co. in Evangeline, La., pays 92 cents for below 20 gravity, adding 2 cents for each degree upward to 40 and over, at $1.34.

Rocky Mountain States

(Effective January 28, 1937)

Iles, Colo., light*	$1.18
Iles, Colo., heavy*	1.12
Greybull, Wyo.*	1.30
Torchlight, Wyo.*	1.30
Grass Creek, Wyo., light (July 8, 1938)*†	1.05
Grass Creek, Wyo., heavy (May 1, 1938)*	.50
Hamilton Dome, Wyo. (May 1, 1938)*	.45
Elk Basin, Wyo., light (July 8, 1938)*†	1.05
Frannie, Wyo., heavy*	.62
Frannie, Wyo., light (May 1, 1938)*	.65
Hogback, N. M. (Jan. 28, 1937)*	1.33
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†‡	1.23
Rock Creek, Wyo.†	1.20¼
Lea County, N. M. (see West Texas gravity table).	
Artesia, N. M. (Jan. 2, 1937)‡	.90
Maljamar, N. M. (Jan. 28,1937)‡	.90
Canon City and Florence, Colo.	1.10
Lance Creek, Wyo.*	.97
Lander, Wyo. (Jan. 1, 1938)§	.51¾
Sunburst, Mont. (Nov. 16, 1937)†	.90
Cat Creek, Mont. (Jan. 1, 1938)‡	$1.30
Garland, Wyo. (Jan. 1, 1937)†	.50

*Stanolind Oil & Gas Co. and Ohio Oil Co. †Ohio Oil Co. ‡Continental Oil Co., Texas Co. (April 1, 1938). §Hudson Oil Co.

Middle Western States

OHIO OIL CO.
(Effective January 28, 1937)

Lima	$1.00
Illinois	1.35
Princeton, Ind.	1.35
Midland, Mich. (Jan. 5, 1938)*	1.12
West Branch, Mich. (Dec. 29, 1937)†	.80
Buckeye (Jan. 8, 1938)	1.09¼
Arenac, Mich. (Dec. 29, 1937)†	.80
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River (July 1, 1938)	1.32
Kentucky River (July 1, 1939)	1.40
Western Kentucky (June 22, 1938)	1.30

*Posted by Pure Oil Co.
†McClanahan P. L. and Simrall. Midland, Mich., price posted by Simrall Corp. and Pure Oil Co. includes Greendale, Porter, Beaverton, Crystal and equal grades. West Branch and Arenac by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Buckeye posted by Simrall Corp. and Pure Oil Co.

West Texas

See gravity table.

Pecos County*	$ .91
Pecos shallow†	.81

*Shell Petroleum Corp., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Petroleum Corp.

Eastern States

TIDE WATER ASSOCIATED OIL CO. and NEW YORK TRANSIT CO.
(Effective June 13, 1938)

Bradford, Pa.	$1.80
Allegany, N. Y.	1.80

SOUTH PENN OIL CO.
(Effective June 13, 1938)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	$1.80
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	1.46
Pennsylvania Grade Oil in Eureka Pipe Line lines	1.40
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.30
Corning Grade Oil in Buckeye Pipe Line Co., line (June 16, 1938)	1.17

PENNZOIL CO.
(Effective June 13, 1938)

Pennsylvania Grade Oil in National Transit Lines:	
Group A	$1.73
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	1.72
Includes Tidioute district.	
Group C	1.71
Includes Turkey and Tidioute districts.	
Group D	1.70
Includes Bear Creek and Porkey districts.	
Group E	1.68
Includes Eideneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	

PURE OIL CO.
(Effective June 13, 1938)

Cabin Creek, W. Va.	$1.40
Bradford Hollow, W. Va.	1.40
Kelly Creek, W. Va.	1.40

Southwest Texas

(Effective January 28, 1937)

Pettus	$1.37
Salt Flat, Darst Creek, Hilbig, Carroll, Clark, Zoboroski	1.09
Lytton Springs	1.12
Luling	1.00

Saxet and Taft take same gravity table as Gulf Coast.

Canada

Ontario (Sept. 9, 1933)*

Petrolia	$2.10
Oil Springs	2.17
TURNER VALLEY NAPHTHAS AND CRUDE OIL	
(January 5, 1938, by Imperial Oil, Ltd.)	
Clear naphtha and discolored naphtha, 65 gravity and higher	$2.14
Discolored naphtha and crude oil, 40-40.9 gravity	1.14
Increasing 2 cents for each degree gravity with top price for 64-64.9 gravity	1.62
These prices f.o.b. producers field tankage.	

*Imperial Oil, Ltd.

Crude Oil Price Changes

Effective July 8 Stanolind Oil & Gas Co. reduced the price of crude oil in two Wyoming fields 25 cents per barrel as follows: Elk Basin, light oil, to $1.05 and Grass Creek, light oil, to $1.05.

Effective July 9 Standard Oil Co. of California increased posted prices for crude oil in the Greeley and Canal fields in Kern County, California. Increases range from 7 cents per barrel for 27-27.9 gravity to 4 cents for 48 gravity and above. The new prices range from 91 cents for 27 gravity to $1.68 for 48 gravity and above. The company says the adjustment is occasioned by a change in the quality of the crude produced since the establishment of the original offering prices.

Effective July 8 Standard Oil Co. of Louisiana posted the following crude oil prices in the Buckner, Magnolia and Village pools in Columbia County, Arkansas: Below 25 gravity, 83 cents; 25-25.9, 85 cents, with 2 cents added for each degree up to and including 40 degrees and over at $1.15. The prices are 7 cents per barrel less on each degree than in other North Louisiana and Arkansas fields in which crude is bought on a gravity basis.

Sun Oil Co. reduced the price of Hardin, Tex., crude 5 cents, or to $1.15 per barrel, effective July 11.

Crude Prices by Gravities

	Oklahoma-Kansas	Oklahoma-Kansas	North and Central Texas	East Central Texas (Mexia district)	North Louisiana-Arkansas	Gray County, Texas	Hutchinson-Carson counties, Texas	Rodessa, Louisiana-Texas and Panola County, Texas	Conroe, Tomball, Raccoon Bend, (Deep) Satsuma	Gulf Coast	Gulf Coast	Lea County, N. Mex. West Texas except Pecos County	Mirando district, Texas	Marion County, Texas	Refugio, Greta, Saxet, Taft, Texas	Anahuac, Flour Bluff, Dickson, Turtle Bay	White Castle, Louisiana	Iowa, Louisiana	Cayuga, Texas
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Bel. 18	....	....	....	....	....	....	....	....	....	$ .95	....	....	....	....	....	....	....	$ .90	....
18-18.9	....	....	....	....	....	....	....	....	....	.95	....	....	....	....	....	....	....	.92	....
19-19.9	....	....	....	....	....	....	....	....	....	.95	....	....	....	....	....	....	$ .94	.94	....
20-20.9	....	....	....	....	....	....	....	....	....	.95	$ .95	....	$ .96	....	$1.01	....	.96	.96	....
21-21.9	....	....	....	....	....	....	....	....	....	.98	.98	....	.98	....	1.03	....	.98	.98	....
22-22.9	....	....	....	....	....	....	....	....	....	1.01	1.01	....	1.00	....	1.05	....	1.01	1.01	....
23-23.9	....	....	....	....	....	....	....	....	....	1.04	1.04	....	1.02	....	1.07	....	1.04	1.04	....
24-24.9	....	....	....	....	....	....	....	....	....	1.07	1.07	....	1.04	....	1.09	....	1.07	1.07	....
Bel. 25	....	$ .98	....	....	$ .90	....	....	$ .93	....	....	....	....	....	$ .90	....	....	....	....	$ .88
25-25.9	....	1.00	....	....	.92	....	....	.95	....	1.10	1.10	$ .78	1.06	.92	1.11	....	1.10	1.10	.90
26-26.9	....	1.02	....	....	.94	....	....	.97	....	1.13	1.13	.80	1.08	.94	1.13	....	1.13	1.13	.92
27-27.9	....	1.04	....	....	.96	....	....	.99	....	1.15	1.15	.82	1.10	.96	1.15	....	1.15	1.15	.94
28-28.9	....	1.06	....	....	.98	....	....	1.01	....	1.17	1.17	.84	1.12	.98	1.17	....	1.17	1.17	.96
Bel. 29	$1.06	....	$ .96	$1.03	....	....	....	....	$1.20	....	....	....	....	....	....	....	....	....	....
29-29.9	1.08	1.08	.98	1.05	1.00	....	....	1.03	1.22	1.19	1.19	.86	1.14	1.00	1.19	....	1.19	1.19	.98
30-30.9	1.10	1.10	1.00	1.07	1.02	....	....	1.05	1.24	1.21	1.21	.88	1.16	1.02	1.21	$1.16	1.21	1.21	1.00
31-31.9	1.12	1.12	1.02	1.09	1.04	....	....	1.07	1.26	1.23	1.23	.90	1.18	1.04	1.23	1.18	1.23	1.23	1.02
32-32.9	1.14	1.14	1.04	1.11	1.06	....	....	1.09	1.28	1.25	1.25	.92	1.20	1.06	1.25	1.20	1.25	1.25	1.04
33-33.9	1.16	1.16	1.06	1.13	1.08	....	....	1.11	1.30	1.27	1.27	.94	1.22	1.08	1.27	1.22	1.27	1.27	1.06
34-34.9	1.18	1.18	1.08	1.15	1.10	....	....	1.13	1.32	1.29	1.29	.96	1.24	1.10	1.29	1.24	1.29	1.29	1.08
Bel. 35	....	....	....	....	....	$ .96	$ .91	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	1.20	1.20	1.10	1.17	1.12	.98	.93	1.15	1.34	....	1.31	.98	1.26	1.12	1.31	1.26	1.29	1.29	....
36-36.9	1.22	1.22	1.12	1.19	1.14	1.00	.95	1.17	1.36	....	1.33	1.00	1.28	1.14	1.33	1.28	1.29	1.29	....
37-37.9	1.24	1.24	1.14	1.21	1.16	1.02	.97	1.19	1.38	....	1.35	1.02	1.30	1.16	1.35	1.30	1.29	1.29	....
38-38.9	1.26	1.26	1.16	1.23	1.18	1.04	.99	1.21	1.40	....	1.37	1.04	1.32	1.18	1.37	1.32	1.29	1.29	....
39-39.9	1.28	1.28	1.18	1.25	1.20	1.06	1.01	1.23	1.42	....	1.39	1.06	1.34	1.20	1.39	1.34	1.29	1.29	....
40,over	1.30	1.30	1.20	1.27	1.22	1.08	1.03	1.25	1.44	....	1.41	1.08	1.36	1.22	1.41	1.36	1.29	1.29	....

Effective July 8, 1938, Standard Oil Co. of Louisiana posted prices in Buckner, Magnolia, and Village pools in Columbia County, Arkansas, as follows: Below 25 degrees 83 cents; 25-25.9 degrees 85 cents; with 2 cents added for each degree upward to and including 40 degrees and above at $1.15.

Column 1—Companies posting are Barnsdall, Bell, Champlin, Continental, Cushing, Derby, Bay, Eason, El Dorado, Cities Service, Falcon, Globe, Gulf, Johnson, National, Phillips, White Eagle, Stanolind, Sunray, Texas, Sun, Vickers and Wilcox.

Column 2—Anderson & Prichard, Carter, Cosco, Deep Rock, Magnolia, Mid-Continent, Pure, Rock Island, Shell, Sinclair, Skelly and Tide Water.

Column 3—All purchasers.

Column 4—Humble Oil & Refining Co. and Sinclair Oil Purchasing Co.

Columns 5, 6, 7 and 8—All companies. Effective July 8, by Standard Oil Co. of Louisiana, Buckner, Magnolia and Village, Arkansas, 7 cents per barrel less than prices in Column 5.

Column 9—Humble Oil & Refining Co. and Sun Oil Co. Tide Water Oil Co.'s schedule starts at 35 degrees, $1.34 with 2-cent spread up to 40 and over at $1.44. (Raccoon Bend prices are for deep sand oil.)

Column 10—The Texas Co. (Gulf Refining Co. pays same prices up to and including 34 gravity, but continues its 2-cent spread up to 40 and over at $1.41.)

Column 11—Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Sun Oil Co. Column 12—All purchasers. Column 13—All purchasers (effective July 6, 1937). Column 14—Magnolia Petroleum Co. Column 15—Humble Oil & Refining Co. (effective July 6, 1937). Column 16—Humble Oil & Refining Co. Columns 17 and 18—Shell Petroleum Corp. Column 19—Tide Water Oil Co.

Rocky Mountain Runs

Production estimates for week ended July 9, 1938:

WYOMING	
Salt Creek	15,800
Big Muddy	1,150
Byron	3,940
Frannie	2,280
Garland	2,250
Grass Creek	2,460
Hamilton dome	1,650
Labarge	880
Lance Creek	11,910
Lost Soldier	2,020
Medicine Bow	3,220
Oregon Basin	3,140
Osage	780
Quealy dome	740
Rock River	1,820
Wertz	920
Other fields	2,210
Total Wyoming	57,170
NEW MEXICO	
Cooper	4,820
Eaves	890
Eunice	24,820
Hardy	2,010
Hobbs	14,340
Jal	1,130
Langlie	3,810
Lynch-North Lynch	610
Lynn	850
Mattix	2,860
Monument	26,000
Penrose	5,160
Skelly	1,670
South Eunice	3,020
Vacuum	2,300
Artesia-Maljamar	5,970
Other fields	1,340
Total New Mexico	101,600
Total Montana	13,080
Total Colorado	3,730

Market Record of Active Oil Stocks

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1938 High	1938 Low	Week ending July 9 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1937	1937 High	1937 Low	1936 High	1936 Low
76¼	55	4,100	76¼	72⅝	73¼	Amerada Corp.	788,675	N.P.	50cQ	7-30-38	$2.00	114⅞	51½	125½	75
25⅝	17¾	6,400	25⅛	23⅞	24	Atlantic Refining	2,663,999	$25	25cQ	6-15-38	1.00	37	18	35⅛	26⅝
21⅝	12⅛	11,100	21⅝	19¾	20	Barber Co.	390,223	$10	75c	12-16-37	1.00	43⅜	10⅛	38½	21
19	10⅛	42,800	19	16⅞	18¾	Barnsdall Oil Co.	2,250,344	$5	25cQ	8-1-38	1.00	35¼	10	28¼	14⅛
10½	7	42,300	10½	10	10¼	Consolidated Oil Corp.	13,915,167	N.P.	20cQ	8-15-38	.90	17⅞	7	17¼	11½
34⅜	21¼	17,000	33⅜	31⅞	32¾	Continental Oil of Delaware	4,682,583	$5	25cQ	6-30-38	1.50	49	24	44⅞	28⅛
9⅛	5	31,700	9⅛	8⅜	8¾	Houston Oil (new)	1,098,618	$25		10-17-30	....	17⅝	4¾	13⅞	6⅜
22⅝	12¼	6,500	20	18¼	19⅜	Mid-Continent Petroleum	1,857,912	$10	25c	6-1-38	1.50	35⅜	14	30⅞	17¼
17¾	10⅝	1,700	17½	16½	16½	Mission Corporation	1,382,945	$10	$1	6-29-38	1.25	34	15	29⅞	16⅜
23	14⅛	15,500	20¾	18⅜	18¾	National Supply	1,155,170	$10	$2 pf.‡	12-22-37	(‡)	41⅜	17⅝	75½	19⅞
14⅞	9	21,200	12	11¼	11⅝	Ohio Oil Co.	6,563,377	N.P.	50c	12-15-37	1.00	22⅞	8	18	12⅛
15⅞	10¼	1,500	14¼	13	13½	Pacific Western Oil	1,000,000	N.P.	75c	12-15-37	.75	29¾	11¾	23½	11⅝
9¼	7	500	9¼	8¼	9¼	Pan American Pet. & Trans.	4,702,945	$5	$1 •	12-21-37	1.00	17⅛	7	20⅝	12¼
43⅜	27¼	14,900	43⅜	41	42⅝	Phillips Petroleum	4,449,052	N.P.	50cQ	6-1-38	2.75	64	30⅛	52⅜	33⅛
22⅜	15	5,600	22⅜	21¼	21⅜	Plymouth Oil Co.	1,029,800	$5	35cQ	3-31-38	1.65	29⅞	13	27⅜	11⅞
13½	8¼	40,700	12¾	11¾	12¼	Pure Oil Co.	3,285,120	N.P.	25c	12-1-37	.25	24⅜	8¾	27⅞	16
8	5	28,200	8	6⅜	8	Richfield Oil Corp.	3,896,638	N.P.	25c	12-24-37	.25	6½	4⅛	..	..
27½	15½	20,200	25¾	22¾	24½	Seaboard Oil of Delaware	1,244,383	N.P.	25cQ	6-15-38	1.00	54⅛	16	44	30½
18¼	10	10,400	18	16	16⅞	Shell Union Oil	13,070,625	N.P.	50c	12-20-37	1.00	34¾	14⅞	28¼	14¾
34⅜	18½	7,200	32⅞	30	30½	Skelly Oil	1,003,949	$15	50c	6-25-38	1.50	60⅝	26½	47⅜	19½
16⅜	10¾	43,900	15⅝	14½	15⅛	Socony-Vacuum	31,151,071	$15	25c	3-15-38	.80	23¼	13	17⅛	12⅛
33⅞	25⅛	20,500	32	30¾	31½	Standard Oil of California	13,014,754	N.P.	35cQ†	6-15-38	2.00	50	27⅛	47⅝	35
35½	24⅝	15,300	33½	31¾	32⅜	Standard Oil (Indiana)	15,267,030	$25	25cQ	6-15-38	2.30	50	26½	48½	32¾
35½	32½	No sales	..	..	..	Standard Oil of Kansas	112,837	$10	$5	12-20-37	5.00	43	30⅝	31	25
56¼	39¾	40,800	56¼	53¾	55¼	Standard Oil of New Jersey	26,224,767	$25	$1SA†	6-15-38	2.50	76	42	70⅜	51⅛
57⅞	45	200	57	56	56	Sun Oil	2,316,484	N.P.	25cQ	6-15-38	$1 & 8⅜ Stk.	77½	44½	91	70
3⅜	1¾	15,600	3⅜	3⅛	3⅜	Superior Oil Corp.	1,388,079	$1			....	7¾	1½	6¾	3
45¾	32⅝	42,400	45½	43⅜	44½	Texas Corp.	10,875,006	$25	50cQ	7-1-38	2.25	65⅛	34⅜	55¼	28⅞
4⅞	2⅝	10,800	4⅝	4⅛	4⅝	Texas Gulf Producing Co.	888,136	N.P.	10c	12-23-37	.10	9⅝	2	8⅞	4⅜
11	7	7,200	10⅞	10⅛	10⅜	Texas Pacific Coal & Oil	888,237	$10	10c	6-1-38	.40	16⅝	5⅜	15¼	7½
15½	10⅛	9,800	15½	14½	14⅞	Tide Water Associated	6,369,175	$10	25cQ	6-1-38	1.20	21⅝	13⅛	21⅜	14⅜
21⅝	17⅛	6,700	22	20⅝	21⅞	Union Oil of California	4,666,270	$25	30cQ	5-10-38	1.40	28¼	17½	28½	20¾
23½	20	900	21¾	21⅛	21½	Union Tank Car Co.	1,200,000	N.P.	30cQ	6-1-38	1.60	31½	22	31⅝	22⅝
3⅛	1⅝	900	2⅞	2⅝	2⅞	Wilcox Oil & Gas	506,522	$5	....	5-10-28	....	6¼	1⅜	5¼	2¾

•Payable in 3⅛% notes. †Includes extras. ‡One-tenth share $2 preferred stock.

New York Curb Exchange

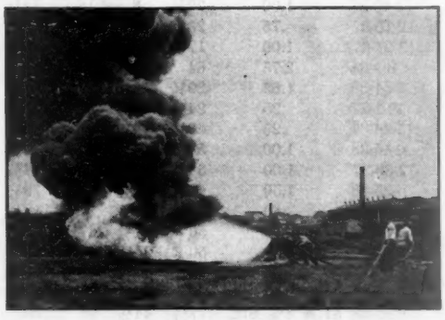
1938 High	1938 Low	Week ending July 9 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1937	1937 High	1937 Low	1936 High	1936 Low
9½	5	7,500	9¼	8⅝	8⅝	American Republics Corp.	1,308,049	$10	30c	12-27-37	$0.40	10	6⅝	..	..
10¼	5⅛	3,500	7½	6¾	6⅞	Bridgeport Machine Co.	260,900	N.P.	1.25	12-30-37	$2.00	21⅜	7	21	13¼
39	31¾	100	35	33	33	Buckeye Pipe Line Co.	200,000	$50	50cQ	6-15-38	3.75	51½	36	50	39¾
111	97	200	111	109¼	109¼	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	6-27-38	7.00	123	95½	124¾	105
11	7¾	5,900	10⅞	9⅝	9⅝	Cities Service (new)	3,714,317	$10	....	6-1-32	....	5⅜	1½	7⅜	3
2⅜	⅞	2,300	1⅜	1¼	1⅜	Cosden Petroleum	462,551	$1	....	.....	....	5½	1½	4½	1½
27½	17½	3,700	23	21¾	22⅞	Creole Petroleum	6,975,383	$5	50cSA†	6 10-38	1.00	38¾	20¼	39	19⅞
9	5½	600	8¾	8¼	8⅝	Darby Petroleum	351,390	$5	25cSA	7-15-38	.50	18⅝	6½	18⅛	9
3½	2	600	2⅞	2⅝	2¾	Derby Oil & Refining	263.162	N.P.			..	8⅜	2¼	6¾	1⅞
31	22⅝	No sales	..	..	..	Eureka Pipe Line	50,000	$50	50c	8-1-38	4.00	47½	24½	47½	38½
44⅞	33	11,400	44⅞	42¾	44½	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-38	1.00	63½	33	59	36
71	56	2,900	71	68	70⅜	Humble Oil & Refining	8,987,840	N.P.	37½c	7-1-38	2.00	87	54⅞	80	57
19½	15	1,600	17¾	17⅛	17⅜	Imperial Oil of Canada	26,965,078	N.P.	62½cSA†‡	6-1-38	1.25	24¼	14½	24½	19¾
8¼	6⅝	600	8	7⅝	8	Indiana Pipe Line	300,000	$10	30c	5-14-38	.80	15	5⅞	9¾	5½
31¼	23	5,000	25¾	24¾	25⅝	International Petroleum	14,324,088	N.P.	$1.25†‡	6-1-38	2.50	39½	23½	39⅝	32⅝
5	3	2,100	4⅛	3¾	4⅛	Kirby Petroleum Co.	500,000	$1	10c	4-15-38	....	8¾	2⅜	5¾	2⅝
25⅛	15⅝	3,400	24¼	22¾	22⅞	Lion Oil Refining	434,820	N.P.	25cQ	4-20-38	1.50	34	12½	17⅜	7⅜
9½	6⅝	2,800	9½	9	9	Lone Star Gas	5,533,747	N.P.	20c	4-20-38	.60	14¼	5¼	14¼	9⅞
9⅜	6½	6,900	8⅞	8¼	8¾	Louisiana Land & Exp.	2,977,449	N.P.	10cQ	6-15-38	.50	15¼	6¾	15⅜	9⅞
8½	6⅜	600	8¼	8	8	Midwest Oil Co.	998,444	$10	50c	6-15-38	1.00	14⅝	6¼	..	..
5¾	4½	1,100	5¾	5⅜	5⅝	Mountain Producers	1,593,584	$10	30cSA	6-15-38	.60	7⅞	4⅛	8⅜	5
14⅝	12⅛	2,000	13½	12⅞	13	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-38	1.00	19½	12	23	17⅜
9¼	7¼	1,300	8	7¾	8	National Transit	509,000	$12.50	35cSA	6-15-38	1.00	12½	7¼	15¾	9¼
2⅝	1½	1,600	2	1¾	1⅞	New Mexico and Arizona	1,000,000	$1	1c	12-1-36	....	5	1⅛	6⅝	1⅝
4½	4	100	4	4	4	New York Transit	100,000	$5	15c	4-15-38	1.00	5⅜	3⅞	6¼	4¼
6	4	100	6	6	6	Northern Pipe Line	120,000	$10	20c	6-1-38	1.00	12¾	5¾	9¾	4⅞
7⅜	3¾	98,300	6¼	5	6⅛	Pantepec Oil	2,441,142	$1	....	.....	....	9⅝	2¾	10⅛	3¼
3½	1⅝	900	3	2¾	2¾	Root Petroleum Co.	336,045	$1	25c	2-1-37	.25	13¾	2	19¼	4½
4	2⅛	300	3¼	3	3¼	Ryan Consolidated	296,931	N.P.	..	.....	....	6½	2¼	4¾	1⅞
5⅜	3⅜	No sales	..	..	..	Southern Pipe Line	100.000	$10	15cSA	3-1-38	.45	7¼	3⅞	7⅞	3¼
39	28¾	400	37	36½	36½	South Penn Oil	1,000,000	$25	50cQ†	6-30-38	3.65	56	35	44	32½
22¼	19	No sales	..	..	..	Southwest Penna. Pipe Lines	35.000	$50	50cQ	4-1-38	2.00	42	20	60	44
18¾	15	1,600	18½	18¼	18½	Standard Oil of Kentucky	2,604,790	$10	25c	6-15-38	1.50	21⅛	14¾	23⅜	17⅛
7½	6⅛	No sales	..	..	..	Standard Oil of Nebraska	166,403	$25	25c	3-29-37	.25	13¾	8	14⅝	11
22¾	16¼	1,800	22½	21½	21½	Standard Oil of Ohio	753,740	$25	25c	6-15-38	1.50	45	16	40	21¾
3¼	2⅛	2,400	3	2⅞	2⅞	Sunray Oil	2,006,176	$1	10c	12-24-37	.25	4⅞	2	5	2⅝
5	3½	600	5	4⅝	4⅞	Texon Oil & Land	936,024	$2	15cQ	6-30-38	.45	7⅝	2	9¾	5⅜
7⅝	4¼	6,300	7	5⅝	6¾	Transwestern Oil Co.	750,000	$10	....	.....	....	13⅞	4⅝	..	..
5¼	2¾	31,300	4⅞	4	4¾	United Gas Corp.	7,818,959	$1	....	.....	....	13⅜	3	10¾	4

†Includes extras. ‡Payable in Canadian funds. §Of which $1 was in preferred

New or Improved Equipment

Fights Fire With Water Spray Instead of With Chemicals

The Spray Engineering Co., Central Street, Somerville, Mass., announced a new line of Fire-Fog nozzles for combating industrial oil fires, particularly in open containers, transformers, dip-tanks, etc. These nozzles use a water spray rather than special chemicals and mark a radical development in the technique of fighting oil fires. In operation, they combine a blanketing and cooling



effect. The use of a water spray eliminates the cost of chemicals and the possibility of the supply being exhausted before the fire is put out.

Spraco portable Fire-Fog equipment has been approved by the Factory Mutual Laboratories of the Associated Mutual Fire Insurance Companies, after an exhaustive series of tests with water pressures from 20 to 160 pounds per square inch. The nozzles may be used coupled directly to a hose or in conjunction with play pipes which are furnished in several sizes.

Bulletins, Booklets and Other Literature for the Trade

Monat Valve & Forge Co., Inc., Pittsburgh, Pa., is mailing on request a bulletin on the Monat Streamflow gate-valve.

M.S.A. industrial gas masks and their applications are described in a bulletin from Mine Safety Appliances Co., Pittsburgh, Pa.

The Figure 6640 ejector centrifugal pump, for deep or shallow wells, is the subject of a bulletin obtainable from Fairbanks, Morse & Co., Chicago.

General Electric Co., Schenectady, N. Y., is offering two new bulletins: GEA-1724A, G-E controllers for synchronous motors; GEA-2026A, G-E brake-motor.

Baker Oil Tools, Inc., Huntington Park, Calif., is mailing to those who ask for it a bulletin enumerating the advantages of the Baker cement wash-down whirler shoe.

A folder describing the new Garlock Bitan leather packings, for use under extreme pressures and severe conditions, may be obtained from Garlock Packing Co., Palmyra, N. Y.

Heat Exchange Institute, 90 West Street, New York, announces publication of "Standards of Steam Jet Ejector and Vacuum Cooling Section." These Standards consist of three parts: (1) Steam Jet Ejectors; (2) Test Code for Steam Jet Ejectors, and (3) Steam Jet Vacuum Refrigeration Equipment. The three parts are bound in one book. Copies may be obtained from the secretary, C. H. Rohrbach, for $1.

A 52-page looseleaf bulletin prepared by Guiberson Corp., Dallas, Tex., gives detailed information about the Guiberson P. L. rotary high-pressure pipe-line pump, with capacities from 10 to 320 bbls. an hour and pressures up to 600 pounds.

A circular giving information about the new automatic Gas-o-Graph flame cutting machine for all types of shapes from plates and billets may be obtained from Compressed Industrial Gases, Inc., 221 North La Salle Street, Chicago.

The Continental Oil Co.'s seventh Wiggins vapor-saving system at its Denver, Colo., refinery is the subject of an article in the current issue of the Water Tower, published by Chicago Bridge & Iron Co., Chicago.

A bulletin describing the construction and applications of Condor whipcord endless belt is being distributed by Manhattan Rubber Manufacturing Division of Raybestos-Manhattan, Inc., Passaic, N. J.

A 24-page illustrated booklet explains in detail the numerous industrial applications of Timken quality tubing which has been added by Joseph T. Ryerson & Son, Inc., to its stocks of certified steels. Included are physical property specifications, tolerance charts, numerical equivalent tables and other data of importance to the user and buyer of seamless mechanical tubing.

Westinghouse Type C general-purpose turbines, with capacities ranging from 5 to 500 horsepower at turbine speeds of 1,000 to 5,000 r.p.m. are described in a 12-page illustrated booklet published by Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.

Permanent and Positive Seal Is Gained at Cut of Piston-Ring

The "Seal Cut" design of the Pedrick piston-ring provides for a positive and permanent seal at the cut or gap of the ring. A perfectly matched lap prevents leakage past the ring at the cut, either down the cylinder-bore or around the ring-groove. The manufacturer says wear of the cylinder walls does not affect this seal, because the cut is lapped far enough to take up all the opening which wear may cause. The design and construction of the cut make for extra strength. There are no thin cross-sections, no fragile tip.

Pedrick "Seal Cut" rings are made in all sizes for air-compressors, pumps, gas engines and oil engines. According to the maker, they seal the cylinder-bore, seal the ring-groove, hold high compression, permit no blowby, make starting easier and stop dilution and contamination.

Like all Pedrick piston-rings, the "Seal Cut" design is heat-shaped, a patented process which insures roundness or equal distribution of radial pressure throughout the circumference of the piston-ring. This process also provides a black iron-oxide coating. Pedrick piston rings are made by Wilkening Manufacturing Co., Philadelphia, Pa., and Wilkening Manufacturing Co. (Canada), Ltd., of Toronto.

Goodall's Skid Protects Rotary Hose From Kinks and Abuse

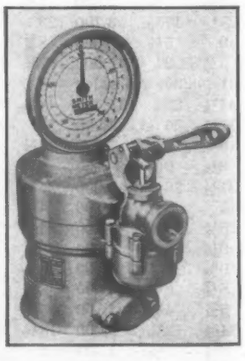
Goodall Rubber Co., Houston, Tex., manufacturer of Goodall Longlife rotary hose and Barney couplings, has developed the Goodall rotary hose skid, a device designed to facilitate the transporting of rotary hose and to protect it against damaging kinks and rough handling.

The illustration shows a 50-foot length of Longlife rotary hose coiled on the skid. This device,

according to the manufacturer, is foolproof. It consists of a turntable with a drum mounted on it. A guide, or eye, causes the hose to feed evenly without kinking or flattening, in either coiling or uncoiling. Mounted on heavy-duty Hyatt roller bearings, the drum and turntable revolve so easily that two men, using the folding handles, can coil a 50- or 55-foot length of rotary hose. The inside of the drum provides a receptacle for the moving of small tools, fittings, and other easily lost articles.

"Newest and Smallest" Meter of Smith Line Is Introduced

Smith Meter Co., Los Angeles, Calif., has announced its "newest and smallest" product, a 1¼-inch streamlined meter for gasoline and fuel-oil tank-trucks and other uses. This Model 3T-40 meter has a normal capacity of 40 G.P.M. and a maximum safe rate of 50 G.P.M. Tests are said to show it operates with extreme accuracy down to 4 G.P.M. It can be furnished with either horizontal reset counter or vertical dial, and also with a set-stop counter and valve for predetermined quantity delivery. For pumpers, a new air eliminator has been developed, which eliminates air and gases before they reach the meter.

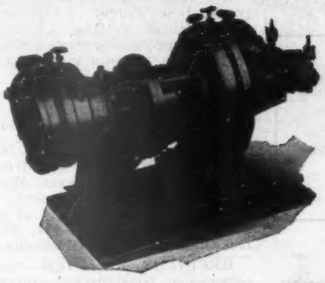


This meter is without reciprocating or oscillating pistons or valves. By utilizing the rotary principle, continuous flow without restriction or interruption of the liquid stream is effected. The design and manufacture of this new meter are such as to insure lasting accuracy throughout its wide range of flow, according to the company, and its sturdy construction provides high resistance to impairment of accuracy by the severe shocks encountered in truck service.

Turbine and Pump Combined in One Unit on Common Shaft

Ingersoll-Rand Co., 11 Broadway, New York, announces a new turbine-driven pump featuring a compact construction that combines both turbine and pump as one unit on a common shaft. This pump, the Class TRV, is built in single-stage sizes for capacities from 5 to 1,000 gallons a minute against heads as high as 220 feet and in two-stage sizes for capacities to 275 gallons a minute and heads up to 550 feet.

The featured unit assembly of pump and turbine makes possible a substantial reduction from ordinary turbine-driven pump weights and sizes. A 15-horsepower single-stage unit is about 32 inches long and other sizes are proportionately



small. This compactness of design not only reduces initial cost, but installation and upkeep expense. No special foundation is required, and units are available for operation in any position. They may be bolted to the floor, wall, tank, column, or ceiling.

Suitable for use wherever a turbine-driven pump is desirable and replacing many older duplex steam pumps, these units are particularly applicable for use in refineries, chemical plants, mines and other locations where hazardous gases are present.

Petersen Made Plant Manager

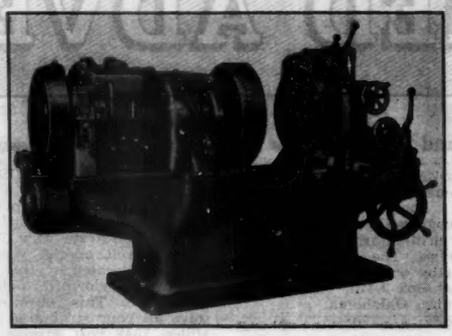
Joseph T. Ryerson & Son, Inc., Chicago, has appointed A. L. Petersen manager of its St. Louis plant. Mr. Petersen, an engineering graduate of Armour Institute of Technology, has been with Ryerson 25 years and has had wide experience in practically every department of the business, working successively in the billing, auditing, purchasing and sales departments in Chicago. After a period of war service he went to the Ryerson plant in Detroit. Then followed a special assignment at the New York plant. For some time Mr. Petersen has been assistant manager of the St. Louis plant.

R. B. Wilson will continue his association with Ryerson as special sales representative and will be responsible for certain important sales contacts in the St. Louis territory.

Another Threading and Cutting Machine Offered by Landis

Landis Machine Co., Inc., Waynesboro, Pa., has added another pipe-threading and -cutting machine with receding-chaser die-head to its line of equipment. This device, the Landis 4¾-inch receding-chaser pipe-threading and -cutting machine, has a capacity of 1⅝ to 4¾ inches O.D. It will generate a tapered pipe-thread of any length up to and including 5 inches, and it will cut all tapers regularly used for plain pipe, and oil-well casing, tubing, and drillpipe, on all sizes within its range.

The receding-chaser feature of Landis threading and cutting machines of this type reduces the cutting strain on the chasers to assure maximum chaser life, accurately tapered threads, and threads of excellent finish. It also permits use of a very narrow chaser which lowers the initial



cost to approximately 50 per cent of the wide chasers ordinarily used for long tapered threads.

The die-head used on the new machine is accurately graduated for all pipe sizes within its capacity. It has a universal adjustment for size, and in addition, there is a micrometer adjustment which makes it possible to obtain an extremely accurate setting. The graduations on the micrometer adjustment are spaced to give a variation of exactly .001-inch diameter. The die-head is equipped with a roughing and finishing mechanism.

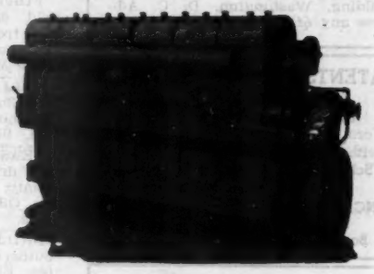
Field Engineer For Bethlehem

Herbert Mains Cooley, of Tulsa, has joined Bethlehem Steel Co. as manager of field engineering in the tubular products division. His work will be principally the development of oil-country tubular products. He will reside in Tulsa, where he will be connected with the Bethlehem Supply Corp., of which G. A. Thompson is vice president. Mr. Cooley was formerly with National Tube Co. as a field engineer. He is a graduate of Carnegie Institute of Technology, Pittsburgh, Pa. He is a member of the Engineers' Club of Tulsa and of the American Petroleum Institute.

Drilling Engine Runs on Either Diesel Fuel or Natural Gas

The new CP diesel drilling engine placed on the market by Bridgeport Machine Co., Wichita, Kans., is a heavy-duty, medium-speed engine, built by Chicago Pneumatic Tool Co. for use in connection with the Bridgeport mechanical rotary drilling rig. It is available in a wide range of sizes with ratings up to 375 horsepower at 900 r.p.m. to fit the power requirements of the various sizes and types of Bridgeport drilling rigs.

Among advanced features of this engine is the fact that it is readily convertible from diesel to natural gas and from natural gas to diesel fuel, making it practical for use in either wildcat drilling or proven field work. The engine is completely



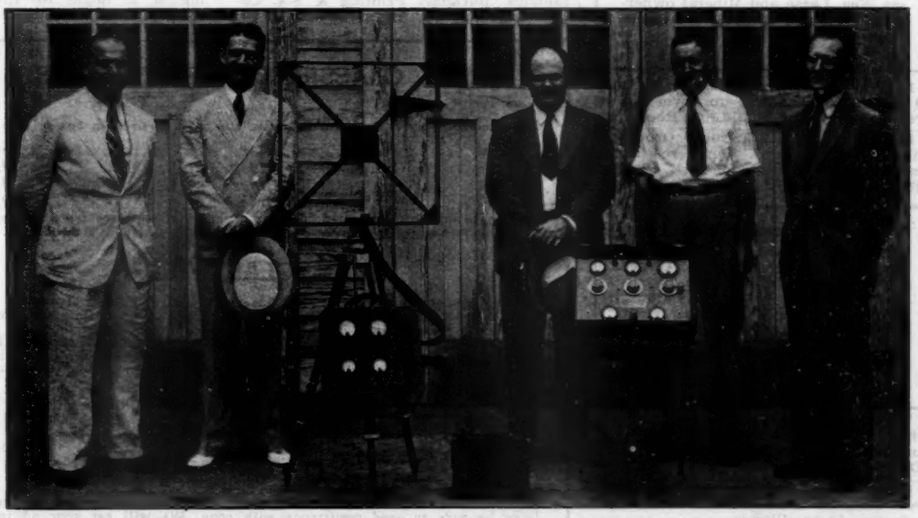
enclosed so that not a wearing part is exposed to dust and dirt. Lubrication is positive and automatic. No part requires hand oiling or greasing.

Here and There With Men Who Manufacture Equipment

Wailes Dove-Hermiston Corp., New York, has appointed Aird-Don Co., Fitchburg, Mass.; Bradford Supply Co., Bradford, Pa., and W. A. Case & Son Manufacturing Co., Jamestown, N. Y., stock-carrying distributors for the Bitumastic line of industrial maintenance protective coatings.

Foote Brothers Gear & Machine Corp., Chicago, has appointed T. C. Graham district representative for oil-field pumping reducers in Texas, Arkansas, Louisiana, and New Mexico. Mr. Graham has represented Foote Brothers six years in the East Texas territory.

BRAZIL COMMISSION STUDIES GEOPHYSICAL METHODS



Members of the commission for investigating geophysical methods for the Brazilian government recently visited Shreveport, La. In the picture are: Dr. Irnack Carvalho de Amaral, chief of the commission; William M. Barret, president, William M. Barret, Inc.; Mark C. Malamphy, consulting geophysicist for the Brazilian government; Clarence Clement, engineer, and Randolph Mayer, geophysicist for William M. Barret, Inc. The Brazilian representatives are shown inspecting electrical equipment recently developed by the Barret organization for geophysical prospecting.

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50,000 A. in and near Ill. production area. Consider drilling deal. Illinois Minerals Co., Cairo, Illinois.

NEW MEXICO is fast developing into great oil state. For reliable information subscribe to my weekly scouting report. Send for sample copy. W. S. Patterson, Santa Fe, New Mexico.

WILL SELL half interest in drilling block, or divide acreage and drill well on cost basis. Box 1203, Abilene, Texas.

Leases and Drilling Blocks

PANOLA COUNTY, EAST TEXAS, BLOCK 5,000 acres. Situated on flank of Sabine Uplift. Located on structure mapped by recognized geologist. Would consider sale or drilling arrangement with responsible parties. The merits of this acreage are worthy of your closest investigation. Address Box J-473, The Oil and Gas Journal, Tulsa, Oklahoma.

FORTY-ACRE lease, Kevin-Sunburst field, one well, 80% operating royalty, acid treatment effective, price $4,000.00, less than value of pipe and equipment. Write Mark Hunt, Oilmont, Montana.

WILL sell 55 ac. leases of Sec. 27 and 14, Twp. 3n, Claremont Twp. of Richland Co., Ill. Chosen drlg. site. G. Hedelin, Rockford, Illinois.

LEASE to responsible party for immediate drilling oil and gas, 270-A. Le Flore County, Oklahoma. Address Box J-478, The Oil and Gas Journal, Tulsa, Oklahoma.

DRILLING deals wanted 50,000 acres Southern Illinois in and around production area. Elmer Gant, Anna, Illinois.

WANTED 100 to 500 acres in fee potential oil land under lease to oil company. Must be low priced. Prefer Calif., New Mexico or Oklahoma. California Land & Investment Company, 741½ So. Alvarado, Los Angeles, California.

ILLINOIS OIL AND GAS LEASES
Semi-proven acreage, and wildcat drilling blocks. SAM J. BURKITT, Moweaqua, Ill.

Ranches and Farm Lands

14,000 ACRES IN TAOS COUNTY New Mexico, about half valley, half mountain. Plenty of running water. Good ranch—or part of valley can be irrigated from the mountain water. Price attractive with terms. JOHN P. MATHIS, Box 1106, Amarillo, Texas.

25,000 ACRE WEST TEXAS RANCH: 20,000 open plateau, solid grama grass, elevation 5000 ft., big black-tail deer. Two pastures, two houses, ten tanks, well, two rock reservoirs, piped water. Detailed geological report. Immense oil structure on state and federal maps. Unleased, state reserved ⅛ minerals. Grass leased $4600; state debt $1.00 3%. Price clear equity $4.00. M. E. Bogle, 105 Routt St., San Antonio, Texas.

Legal Blanks

Since 1908 Burkhart's legal forms have served the Oil Industry—Free catalog & samples. Burkhart Printing & Sta. Co 115 So. Cincinnati, Tulsa, Oklahoma.

Survey Service

THE DOWSING METHOD for locating oil structures, faults, and treacherous areas, operates on the principal of vibratory response to emanations from petroliferous sub-strata. Our WATSON No. 2, pioneer well of the Wilmington, Calif., field was located by this method and all my personally owned production. 15 years' experience. This physico method may solve all your structural difficulties. Geo. Miller, 1548 Post Avenue, Torrance, California. Phone 983.

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MEXICO CATTLE RANCH: 100,000 acres, fenced, ample water, no ticks, 65% vast open flat valley, solid turf grama grass, flanked with majestic mountains. Valley elevation 5,000 feet, cool summer resort climate. All American neighbors. Bear, deer, antelope, puma, coyotes, turkey, quail. 2,200 high grade Hereford cows, 2,000 calves, 100 bulls, 100 horses. Net annual income $25,000; operating cost $7,000. Price with cattle $125,000; half cash. World's best cattle land; equals $10 to $20 Texas ranches. Low taxes, cheap labor, no dipping, no winter feeding. M. E. Bogle, 105 Routt St., San Antonio, Texas.

Situations Wanted

GRADUATE engineer, 20 yrs.' exp. Oil and Gas, 3 yrs. with state regulatory comm, wants pos. with prod. co. Now employed, desires change. Address Box J-461, The Oil and Gas Journal, Tulsa, Oklahoma.

PETROLEUM ENGINEER, 13 years with same major oil company, 5 years California, 8 years Java, Borneo, Venezuela, wide practical experience and theoretical knowledge Drilling, Production, Geology, B.Sc. London University, A.R.S.M. Royal School of Mines, London, Oil Technology. Age 36, married, English. Resigning present position Venezuela middle August, offers services. Fully capable of undertaking complete responsibility for oilfield development. Address Box J-463, The Oil and Gas Journal, Tulsa, Okla.

GRADUATE GEOLOGIST, 10 years' experience, surface and subsurface geology and geophysics, in Texas, Wyoming and Illinois, desires permanent connection with responsible company as geologist or scout. Address Box J-471, The Oil and Gas Journal, Tulsa, Oklahoma.

REFINERY MANAGER—twenty years' experience construction and operation—employed as manager now, desires change—have operated complete refineries—cracking—lubricating oil and asphalt. Available on short notice. Address Box J-476, The Oil and Gas Journal, Tulsa, Oklahoma.

MALE Stenographer—Private Secretary desires high class connection Aug. 3. College grad., 34, single, references. Address Box J-477, The Oil and Gas Journal, Tulsa, Oklahoma.

YOUNG mechanical engineer with roughneck and roustabout experience with major oil company, seeking foreign service with oil or pipe line company. Now employed in engineering capacity with pipe line company. Single and free to travel. Also qualified photographer. Address Box J-479, The Oil and Gas Journal, Tulsa, Oklahoma.

WAREHOUSEMAN and production clerk, thoroughly experienced in all phases of field warehouse and production office work, desires foreign job. Age 34. Thirteen years' experience with major company and still employed by same company. Box 804, Taylor, Texas.

MAN: 28, gas, gasoline and oil testing experience, mechanical ability, small company preferred. 5939 Pershing, St. Louis, Missouri.

Manufacturer

Established Manufacturer of Oil Field Equipment with large plant and ten (10) stores in Mid-Continent and California Oil Fields desires to manufacture patented items for use in pipe line pumping, production pumping, or drilling service. Address Box J-403, The Oil and Gas Journal, Tulsa, Okla.

Incorporations

DELAWARE CHARTERS: Complete service $35. Submitted forms. Chas. G Guyer, Inc., Wilmington, Delaware.

CHARTERS — Delaware best, quickest, cheapest, more liberal. Free forms Colonial Charter Co., Wilmington, Del.

Equipment Wanted

WANTED — Gasoline powered rotary drilling rig, capable of going 4,000 feet. Will pay cash for good bargain. Give full description. W. P. Luse, Magnolia Building, Dallas, Texas.

WANTED: Used Waukesha standard ASTM-CFR Octane testing unit. FELDMAN PETROLEUM CO., 2250 So. Ashland Ave., Chicago, Illinois.

WANTED—Used Thrift Hydraulic Pipe Pulling Outfit. State price and condition. Address Box J-462, The Oil and Gas Journal, Tulsa, Oklahoma.

WANTED: for cash, complete Rotary Drilling Rig. Gasoline or Diesel. Drilling capacity 4000 feet. Give description and location. P. O. Box 1132, Dallas, Texas.

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	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
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Tulsa, Oklahoma